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EXPERIMENTAL HISTORIES OF CULTURE

EDWARD ROSE AND WILLIAM FELTON

University of Colorado

A SHORT while ago Guy E. Swanson published a report on the production in the laboratory of crowds that consisted of only three people.¹ His paper offered evidence that the behavior of crowds of all sizes can be expressed in the behavior of three people acting under controlled conditions. His most important control, that which made possible direct and repeated examination of crowd phenomena, was, of course, this drastic restriction on the size of his experimental groups. The elegance of his studies followed from the reduction of social facts to manageable and yet sufficient magnitudes that made for efficiency in observation and analysis.

Here is a description of certain laboratory studies of culture that employed similar techniques of limitation upon field phenomena through laboratory controls. We dealt with laboratory populations that were barely large enough and that assembled in just enough sessions long enough to allow enough communication to make for the rudimentary expression of certain shared experiences that qualify as culture. Our aim was not to bring about an image, but rather the actualization of culture out of experimental transactions.

We sought to produce culture in the laboratory and to specify some of its experimental operations. And we were interested in how such operations as invention and culture borrowing could go to make up various culture histories in the laboratory. Finally, we

made use of these laboratory histories to test some ideas about culture.

THE EXPERIMENTAL PRODUCTION OF CULTURE

Culture is a term that has been assigned many meanings.² The one meaning that we attempted to induce experimentally was the generalization in Tylor's original definition: "... capabilities and habits acquired by man as a member of society."³ This is a statement of one of the simplest arrangements for inquiry: an independent variable of social membership and a dependent variable of "capabilities and habits." The study of culture as thus defined calls for observations of the dependence of "habits" on memberships in "societies."

To produce culture we conducted a series of group Rorschach experiments. We asked small groups of people to examine together certain inkblot cards and to tell one another what could be seen in the cards. These groups met during a series of brief sessions. Each successive session called for the examination and discussion of several inkblot cards that had been seen and talked about in preceding sessions. It was thus possible for any person to copy—or, if he chose, not to copy—Rorschach responses previously made public by others or by himself. Our labora-

¹ See A. L. Kroeber and C. Kluckhohn, "Culture: A Critical Review of Concepts and Definitions," *Papers of the Peabody Museum of American Archaeology and Ethnology*, Vol. 67, No. 1, 1952.

² *Primitive Culture*, London: John Murray, 1873, Second Edition, Vol. 1, p. 1.

³ "A Preliminary Laboratory Study of the Acting Crowd," *American Sociological Review*, 18 (October, 1953), pp. 522-533.

tory culture consisted, accordingly, of a disjunct collection of copied, public ideas freely brought forth and freely handed on throughout small experimental populations.

In each experiment a population was divided into several completely separated small groups that were put through the performance of responding simultaneously and repeatedly to identical inkblot cards during a series of co-ordinated sessions. As each experiment progressed, the memberships of the separated groups were rearranged at certain intervals. Thus a Rorschach response could be *invented* and discussed in one group, copied and thus *borrowed* by other members of that group, or repeated as a *habit* by the original inventor, or perhaps by a borrower, and ultimately, with an interchange of group members, diffused to other groups where it might be borrowed by still other subjects. Through these processes of invention, borrowing, and habitual repetition, certain responses reached wide distribution.

The words, "invention," "borrowing," and "habit," designate observable operations in the experiments. When a person copied his own previous responses, he displayed habit. When he copied the previous responses of others, he displayed borrowing. When he pointed to something new, to some figure in the Rorschach cards not previously brought to notice, he displayed invention. We found it useful to distinguish as a separate sort of response, habits that had originated as borrowings. Responses that were thus both borrowings and habits we have called *culbits*. A literal reading of Tylor's definition would confine culture to culbits, to socially acquired habits. A more serviceable rendering extends the term to all four operations, for *the four are not different behaviors* as immediately observed and recorded, but are different sorts of events in cultural processes. We called all of these operations cultural responses. Our experiments explored the dependence of these particular responses on membership in laboratory societies.

SOCIETY AND HISTORY

Our experimental cultures were structurally primitive. One response might suggest another, but never required its public expression. The cultures were collections, not systems. The induction of such simple cul-

tures required in turn some simple arrangements of social situations.

In each of the experiments described here cultural processes were induced in three separate groups of three persons each during the course of seven to nine periods that lasted sixteen minutes each. We have used the terms, *society* and *epoch*, to designate groups and periods in order to specify the two historical features—social and temporal separations—that were expressly built into our experimental models.

To call a few minutes epochs and tiny groups societies violates the full meaning and intent of these terms. But we followed common laboratory practices of abstracting and reducing phenomena to manageable limits. We tried to include in our laboratory models no more than was necessary to bring forth the sorts of events that were of interest to us. And so we worked with such minimal operating definitions of societies and of historical epochs as would allow the investigation of certain simple effects of society on culture. Society and epoch describe the principal controls of the experiments, controls over memberships and over periods of social and cultural experience. An array of societies undertaking tasks of cultural response through a series of epochs make up what we have called experimental histories. Table 1 records the designs of our experimental histories.

Table 1 illustrates four experimental histories and four (out of many) cultural developments. In this table the various culture responses are associated by their respective symbols with particular persons located in the separate societies. Careful examination of the memberships of the societies will disclose various combinations of *closed* and *open* societies. Continued isolation describes a closed society. Mobility describes an open society. In Experiment 1, for instance, the memberships of each society did not change until the fourth epoch. Thereafter, the membership of each society changed with every epoch. This experiment thus presents a history where the course of change was from isolation to mobility.

The movement of people may be expected to lead to the movement of ideas, to the spread of culture from one society to another. Several such diffusions are illustrated in

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TABLE 1. FOUR EXPERIMENTAL HISTORIES AND FOUR TYPICAL CULTURAL DEVELOPMENTS *

Epoch	Society			Society				
	X	Y	Z	X	Y	Z		
	Experiment 1. Cultural development illustrated: the idea of a <u>white angel</u> .				Experiment 2. Cultural development illustrated: the idea of a <u>spur</u> .			
I	a b c	d e f	g h i	a b c	d e f	g h i		
II	a b c	d [e]	f	a b c	d e f	[g] h i		
III	a b c	[d] e f	g h i	a b c	d e f	g h i		
IV	a [d] g	b e i	c f h	a b c	d e f	g h i		
V	[a] e h	b [f] g	c d i	a b c	d e f	g h i		
VI	a [f] i	b a h	c e g	a d g	b e h	c f i		
VII	a [b] c	d e f	g h i	a [e] i	b f g	c d h		
VIII	- - -	- - -	- - -	a f h	b d i	c e g		
IX	- - -	- - -	- - -	a [b] c	d e f	g h i		
	Experiment 3. Cultural development illustrated: the idea of a <u>brassiere</u> .				Experiment 4. Cultural development illustrated: the idea of a <u>map of Chile</u> .			
I	a b c	d e f	(g) h i	a b c	d e f	(g) h i		
II	a b c	d e f	(g) h i	a d g	b e h	c f i		
III	a b c	d e f	(g) h i	a e i	b f g	c d h		
IV	a b c	d e f	(g) h i	a t h	b d i	c e g		
V	a d g	b e h	c f i	a b c	d e f	g h i		
VI	a d g	b e h	c f i	a b c	d e f	g h i		
VII	a d g	b e h	c f i	a b c	d e f	g h i		
VIII	a [d] g	b e h	c f i	a b c	d e f	g h i		
IX	a [b] c	d e f	(g) h i	a b c	d e f	g h i		

* Small letters represent particular individuals. Cultural responses are symbolized as follows: Invention: ○; Culture borrowing: □; Habit: ◊; and Culbit: △.

Table 1. There is a belief that the spread of culture encourages cultural creativity, that invention is brought on in open societies and curbed in closed societies. Our experiments made it possible to see what actually happened by way of cultural expression as open and closed societies were variously combined in laboratory histories.

Experiments 1 and 2 were conducted to find out what would take place in laboratory cultures when people were confined for a while to closed societies and then permitted to move about from society to society. Experiment 3 moved persons from one closed situation to another closed situation. Experiment 4, by bringing people from open to closed societies, is the reverse of Experiment 2. Together these four experiments give some indication of what may be expected in laboratory cultures as isolation is abandoned (Experiments 1 and 2), as it is transfixed (Experiment 3), and as it is instituted (Experiment 4) as a structural feature of society.

The problems of the experiments were suggested by problems of history. Culture histories involve orders of events and relationships that transcend the experience, not only of single individuals, but also of single groups. Our studies have attempted to bring such historical orders within the scope of experimental inquiry.

TECHNIQUES

Each of the experiments was conducted in the following manner. Three groups of three persons each were located in separate rooms. Following a practice session on Inkblot Card 8, each group was presented with Card 9 to look at for eight minutes. During the first two minutes each person in a group recorded on an individual response sheet the concepts he was able to draw from the card. Talking was not allowed during these two minutes. During the remaining six minutes each of the three subjects in a group was given two minutes to talk about what he saw in the card. The order of this discussion was systematically rearranged in subsequent sessions repeating this sort of discussion. While one person was pointing out the concepts he derived from the card, the other two were free to indicate openly their agreement or disagreement with his views. In addition to

these verbal responses they were asked to write down plus or minus signs on carbon copies of his individual response sheet to provide permanent records of their agreements or disagreements on each of his concepts. This recording technique assured the direction of attention of every person in a group towards every concept proposed by each person. After thus working with Card 9 for eight minutes each group worked with Card 10 in exactly the same fashion: two minutes were allotted to individual and private responses and six minutes were then devoted to social responses. A total of sixteen minutes thus spent on Rorschach Cards 9 and 10 completed the first period or epoch.

The procedure of each subsequent period was like that of the first: eight minutes of response to Card 9 were followed by eight minutes of response to Card 10. The only arranged changes throughout each experiment were changes in personnel of the miniature societies as indicated in Table 1.

Subjects were prepared for an experiment in a general instruction session in which they were told that they were about to participate in a study of group responses to Rorschach cards. They were showed Rorschach Card 8. At no time before or during the experiment were the words "culture," "habit," "culbit," or "invention" used by the experimenters. In the instruction session the timing and mechanics of recording responses were described. The subjects were told that they would be divided into groups that might work separately through several periods. Concerning responses to the inkblot cards, the following carefully worded statement was made: "You may be as specific or as general about the concepts you see as you want to be. You may suggest as many concepts as you want. As long as you see the concept you may suggest it. You should feel completely free to write down and present to your group any concept you see regardless of whether or not the concept is a new one or was suggested by someone else or yourself in an earlier session." Great care was taken during the experiments not to indicate what sorts of responses we were seeking.

An observer sat with each group for timing and recording. He never entered into the conversations except to give directions as to mechanics.

EXPERIMENTAL HISTORIES OF CULTURE

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TABLE 2. CULTURAL RESPONSES TO SOCIAL SITUATIONS *

Experiments:		1		2		3		4		1		2		3		4	
Epoch	Society	Membership Type	Inkblot Card	Membership Type	Inkblot Card	Membership Type	Inkblot Card	Membership Type	Inkblot Card	Membership Type	Inkblot Card						
		9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10
<u>Inventions:</u>																	
I	X	17	22	9	14	8	11	14	19	-	-	1	1	6	5	1	5
	Y	12	14	3	4	11	16	10	12	-	-	0	1	4	8	2	2
	Z	13	18	4	7	7	11	12	15	-	-	0	2	5	7	5	5
II	X	9	11	9	12	1	5	2	4	5	3	1	1	6	5	1	5
	Y	6	10	7	5	6	5	7	4	5	8	0	1	4	8	2	2
	Z	5	3	5	6	4	6	4	5	6	13	0	0	5	7	5	5
III	X	10	9	9	5	4	4	2	2	2	0	1	2	3	6	2	2
	Y	3	4	3	4	4	10	1	2	3	7	0	0	0	3	6	6
	Z	3	0	4	6	7	7	3	5	6	8	0	0	0	3	6	4
IV	X	1	3	C ₂₁	6	5	4	8	A ₁₁	1	0	2	0	3	3	4	4
	Y	4	2	B ₁₁	4	5	6	12		1	2	2	0	0	0	3	2
	Z	0	2	4	4	4	9	1	2	5	5	5	5	1	0	2	2
V	X	4	2	6	7	4	4	1	2	7	6	2	1	1	4	6	6
	Y	2	2	5	4	B ₃₁	1	0	0	7	9	0	1	1	3	4	4
	Z	1	3	3	3	6	6	1	1	8	10	1	0	2	2	4	4
VI	X	4	1	A ₁₁	1	0	2	0	0	0	9	6	0	3	4	1	1
	Y	0	0	B ₂₁	0	1	6	3	1	1	7	9	1	2	7	7	3
	Z	1	0	2	1	6	7	0	2	1	3	6	7	6	7	4	2
VII	X	0	2	2	1	6	2	4	C ₁₁	0	0	6	9	4	2	1	2
	Y	1	1	1	1	C ₃₅	9	7		1	1	10	9	7	9	7	6
	Z	1	0	1	1	9	7	1	1	11	9	9	7	6	7	3	6
VIII	X	2	0	A ₂₁	2	1	6	2	A ₁₂	4	8	3	5	5	5	1	2
	Y	1	1	1	1	9	4	0	0	B ₂₂	4	6	5	5	3	2	1
	Z	1	0	1	1	9	4	0	1	11	9	5	5	4	3	2	1
IX	X	1	4	1	4	2	0	0	A ₂₂	7	3	5	3	2	0	0	0
	Y	1	0	B ₃₅	1	1	1	0		6	4	6	10	4	2	1	2
	Z	4	0	2	1	1	1	2		4	7	2	4	0	0	2	1
<u>Habits:</u> **																	
II	X	8	7	6	5	6	9	12	12	-	-	0	1	5	5	2	2
	Y	5	10	5	1	6	14	8	10	-	-	0	1	3	3	3	3
	Z	12	14	0	1	4	7	8	13	-	-	0	0	4	1	2	4
III	X	6	9	5	6	7	14	11	13	C _{1h}	2	2	0	1	5	5	2
	Y	15	19	7	6	C ₃₃	14	6	13	C _{1h}	5	8	0	1	3	3	3
	Z	15	18	0	0	7	7	13	13	5	12	0	0	4	1	2	4
IV	X	14	18	B ₁₃	8	11	11	16	A ₁₃	12	21	B ₁₄	2	1	5	5	2
	Y	16	20	6	6	2	3	11	14	B ₁₄	7	11	C ₂₄	0	3	6	7
	Z	17	18	0	0	9	18	13	10	B ₁₄	6	7	0	0	3	8	2
V	X	15	18	4	4	8	18	14	21	B ₃₄	7	9	1	0	9	6	7
	Y	18	18	7	7	B ₃₃	12	24	14	B ₃₄	13	14	0	2	10	13	19
	Z	15	20	0	0	21	23	10	15	B ₃₄	13	15	0	0	6	6	8
VI	X	17	22	B ₂₃	15	15	9	23	15	A ₁₄	11	14	B ₂₄	2	3	10	9
	Y	15	25	9	7	6	8	13	11	A ₁₄	20	15	B ₂₄	2	4	8	7
	Z	15	20	12	0	15	19	13	15	A ₁₄	17	22	B ₂₄	1	2	4	5
VII	X	18	24	11	12	12	21	14	18	A ₂₄	20	16	1	5	13	7	8
	Y	18	21	15	16	C ₃₇	10	10	13	A ₂₄	23	26	2	5	15	13	14
	Z	16	15	15	16	16	18	11	17	A ₂₄	21	30	4	1	7	8	15
VIII	X	18	24	11	16	19	13	14	19	A ₂₄	7	8	18	9	12	13	13
	Y	18	21	12	14	9	15	13	12	A ₂₄	5	7	13	16	22	28	28
	Z	16	15	15	11	26	25	12	13	A ₂₄	4	6	14	11	20	18	18
IX	X	12	15	12	15	20	29	15	18	A ₂₄	4	5	20	23	10	13	13
	Y	12	15	12	15	B ₃₇	15	20	13	A ₂₄	6	8	B ₃₈	10	9	25	29
	Z	7	8	7	8	26	29	11	15	A ₂₄	4	6	B ₃₈	14	11	21	19

* Membership types with which cultural responses were associated: C: closed societies; B: new societies; and A: open societies. The responses in type C₁₁ were, for example, inventions in Experiment 1 associated with closed societies during Epochs II and III. Note that culture borrowings are treated as delayed responses to experience in preceding epochs.

** Borrowings and habits could not appear before Epoch II; culbits, which are habitually expressed borrowings, could not appear before Epoch III.

The subjects were students at the University of Colorado. No subject was used in more than one experiment. An effort was made to provide similar and constant conditions throughout the experiments except for changes in group memberships as outlined in Table 1.

ANALYSIS

Table 2 records the cultural responses that appeared in the four experiments. Table 2 also records classifications of social situations with which the responses were associated. A situation was treated as part of a closed society during any epoch in which the personnel was like that of the preceding epoch; it was treated as a new society during any epoch initiating a change of personnel; and it was treated as part of an open society during any epoch marked by a change of personnel that followed an epoch also marked by new or changed personnel. Closed societies are distinguished by lack of social change, new societies by unusual change, and open societies by usual or constant change. New societies end isolation and may start mobility. Table 2 shows that changes in invention and habit appear to have been expressed immediately in new societies, but that changes in culture borrowings occurred more notably in the epoch following contact with a new society. Borrowings thus appear to be delayed responses to experience in society; inventions, habits, and culbits appear to be contributions immediately offered to society. The delayed responses of borrowings were taken into consideration in our analysis of Table 2.

Table 3 presents a series of arguments on cultural response derived by inspection of Table 2. Hypotheses bearing on these arguments were subjected to statistical analysis, the results of which are recorded in Table 3. In testing hypotheses we chose Ackoff's Tests 4 and 17 for values of t and Test 19 for values of F .⁴ These tests assume randomness, normality, and in Tests 17 and 19, equal variances. Normality, in particular, does not appear to be indicated by some of the samples. It is a matter of trust that the t -tests are not greatly disturbed by characteristics

of the data that may not fit the assumptions. Responses to Inkblot Cards 9 and 10 were included together in some of the tested arrays in order to increase degrees of freedom.

Test 1 may be taken as an example of how to read Table 3. In Test 1 the null hypothesis, H_0 , asserts that open society inventions arrayed in classifications A_{11} , A_{21} and A_{41} (and recorded in Table 2 in such magnitudes as 4, 2, 1, 4, 0, 1, 0, 1, etc.) represent a population with a mean value equal to or greater than the mean of a population represented by closed society inventions arrayed in C_{11} , C_{21} and C_{41} (and recorded in Table 2 in such magnitudes as 9, 6, 5, 10, 3, 3, etc.). The alternative hypothesis, H_1 , is that the average number of inventions in open societies is less than the average in the closed societies (or that such an array as 4, 2, 1, 4, 0, 1, 0, 1, etc., is not likely to be randomly selected from a population that yields a random sample of such high values as 9, 6, 5, 10, 3, 3, etc.). The t -test (Ackoff's Test 17) yields for Test 1 a value of 2.855. This is greater than t'' , which is the value of t at the 1 per cent level of significance indicated by 58 degrees of freedom (df). The 5 per cent level of significance utilized in other tests is symbolized by t' . Since t at 2.855 is greater than t'' , the null hypothesis is rejected: the chances are less than one in a hundred that such an array of values for open society inventions would be drawn at random from a population of values whose mean was equal to or greater than that of the population represented by the sample of closed society inventions. The alternative hypothesis appears to be acceptable. Tests 1 and 2 tend to support Argument 1 that open societies curb invention more than closed societies. However, since the better designed and thus more critical Tests 3 and 4 oppose the argument, it is rejected.

Conclusions regarding the arguments on culture response are included in Table 3. The arguments thus tempered by statistical analysis are presented below. We should expect repetitions of the experiments under similar conditions to lead to similar findings.

Habits are copies of inventions. Culbits are copies of borrowings. Borrowings can be copies of inventions, habits and culbits. Our experiments are not designed to explore these

⁴ Russell L. Ackoff, *The Design of Social Research*, Chicago: The University of Chicago Press, 1953, pp. 187, 200 and 202.

EXPERIMENTAL HISTORIES OF CULTURE

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TABLE 3. TESTS OF HYPOTHESES ON CULTURAL RESPONSES TO SOCIAL SITUATIONS *

Arguments	Test	Inkblot Cards	Hypotheses Tested	Results
1. Open societies always curb invention more than closed societies. Tests 1 and 2 support the argument; inventions tended to be plentiful in closed societies and rare in open societies. But the more discriminating Tests 3 and 4 oppose the argument; early and late inventions in open societies do not appear to be significantly less than early and late inventions in closed societies. Reject the argument.	1 2 3 4	9 10 9 10	$H_0: A_{11}, A_{21} \& A_{31} \geq C_{11}, C_{21} \& C_{31}$ $H_1: A_{11}, A_{21} \& A_{31} < C_{11}, C_{21} \& C_{31}$ H_0 and H_1 are the same as in Test 1 $H_0: A_{21} \& A_{31} \geq C_{21} \& C_{31}$ $H_1: A_{21} \& A_{31} < C_{21} \& C_{31}$ H_0 and H_1 are the same as in Test 3	$t = 2.855 > t^*$, df:58; reject H_0 $t = 3.118 > t^*$, df:58; reject H_0 $t = 1.724 < t^*$, df:13; reject H_1 $t = 1.511 < t^*$, df:43; reject H_1
2. Invention is always curbed in open societies. All of the tests support the argument; none of the open societies equaled the production of inventions that is possible in closed societies. Tests 7 and 8 are critical. Accept the argument.	5 6 7 8	9 & 10 9 & 10 9 10	$H_0: A_{11} \geq C_{11}$ $H_1: A_{11} < C_{11}$ $H_0: A_{21} \geq C_{21}$ $H_1: A_{21} < C_{21}$ $H_0: A_{31} \geq C_{31}$ $H_1: A_{31} < C_{31}$ H_0 and H_1 are the same as in Test 7	$t = 13.685 > t^*$, df:28; reject H_0 $t = 5.895 > t^*$, df:40; reject H_0 $t = 4.187 > t^*$, df:22; reject H_0 $t = 3.593 > t^*$, df:22; reject H_0
3. Entrance into new societies brings about immediate decreases in invention. The tests support the argument. Accept the argument.	9 10	9 10	$H_0: B_{11}, B_{21}, B_{31} \& B_{35} \geq C_{11}, C_{21}, C_{31} \& C_{35}$ $H_1: B_{11}, B_{21}, B_{31} \& B_{35} < C_{11}, C_{21}, C_{31} \& C_{35}$ H_0 and H_1 are the same as in Test 9	$t = 4.732 > t^*$, df:46; reject H_0 $t = 3.860 > t^*$, df:46; reject H_0
4. Invention is fostered in closed societies that follow closed societies; it is curbed in closed societies that follow open societies. Test 11 demonstrates that inventions are significantly high in closed societies that follow closed societies. Tests 12 and 13 show that inventions are significantly low in closed societies that follow open societies. Accept the argument.	11 12 13	9 & 10 9 & 10 9 & 10	$H_0: C_{35} \leq A_{21}$ $H_1: C_{35} > A_{21}$ $H_0: C_{41} \geq C_{35}$ $H_1: C_{41} < C_{35}$ $H_0: C_{41} \geq A_{41}$ $H_1: C_{41} < A_{41}$	$t = 3.773 > t^*$, df:46; reject H_0 $t = 5.853 > t^*$, df:40; reject H_0 $t = 3.695 > t^*$, df:46; reject H_0
5. Culture borrowing increases immediately following experience in new societies. The test supports the argument. Accept the argument.	14	9 & 10	$H_0: B_{12}, B_{22} \& B_{32} \leq C_{12}, C_{22} \& C_{32}$ $H_1: B_{12}, B_{22} \& B_{32} > C_{12}, C_{22} \& C_{32}$	$t = 6.053 > t^*$, df:70; reject H_0
6. The level of borrowing that is reached following experience in a new society is maintained through succeeding epochs of an open society. The tests, which relate borrowings in open societies to means of borrowings in new societies, support the argument. Accept the argument.	15 16 17 18	9 10 9 10	$H_0: A_{12} = \bar{x}_{B_{12}}$ $H_1: A_{12} \neq \bar{x}_{B_{12}}$ H_0 and H_1 are the same as in Test 15 $H_0: A_{22} = \bar{x}_{B_{22}}$ $H_1: A_{22} \neq \bar{x}_{B_{22}}$ H_0 and H_1 are the same as in Test 17	$t = .000 < t^*$, df:5; reject H_1 $t = .470 < t^*$, df:5; reject H_1 $t = .168 < t^*$, df:5; reject H_1 $t = 1.862 < t^*$, df:5; reject H_1
7. The level of borrowing that is reached following experience in a new society is maintained through succeeding epochs of a closed society. The test, which relates borrowings in closed societies to a mean of borrowings in preceding new societies, opposes the argument. Reject the argument.	19	9 & 10	$H_0: C_{36} = \bar{x}_{B_{32}}$ $H_1: C_{36} \neq \bar{x}_{B_{32}}$	$t = 3.274 > t^*$, df:17; reject H_0

* H_0 : null hypothesis; H_1 : alternative hypothesis; A, B and C: classifications of data in Table 2; t^* : t at the 5% level of significance; t^* : t at the 1% level of significance; df: degrees of freedom; \bar{x} : mean; I: increase.

Table 3 continued

Arguments	Test	Inkblot Cards	Hypotheses Tested	Results
8. Habits are fostered more in open societies than in closed societies.	20	9	$H_0: A_{13} \leq C_{13}$ $H_1: A_{13} > C_{13}$	$t = .833 < t^*$, df:16; reject H_0
Three of the tests seem to support the argument; three oppose it. Arguments 9 and 10 below lend support to this argument. Note that Argument 10 is not well established. This argument is questionable.	21	10	H_0 and H_1 are the same as in Test 20	$t = .536 < t^*$, df:16; reject H_0
	22	9	$H_0: A_{13} \leq C_{23}$ $H_1: A_{13} > C_{23}$	$t = 9.936 > t^*$, df:22; reject H_0
	23	10	H_0 and H_1 are the same as in Test 22	$t = 9.874 > t^*$, df:22; reject H_0
	24	9	$H_0: A_{13} \leq C_{33}$ $H_1: A_{13} > C_{33}$	$t = 3.325 > t^*$, df:19; reject H_0
	25	10	H_0 and H_1 are the same as in Test 24	$t = 1.827 < t^*$, df:19; reject H_1
9. The increase of habits in new societies is significantly greater than the increase of habits in closed societies.	26	9	$H_0: I_{B13}, I_{B23}, I_{B33} \& I_{B37} \leq$ $I_{C13}, I_{C23}, I_{C33} \& I_{C37}$ $H_1: I_{B13}, I_{B23}, I_{B33} \& I_{B37} >$ $I_{C13}, I_{C23}, I_{C33} \& I_{C37}$	$t = 3.503 > t^*$, df:58; reject H_0
The tests support the argument. Tests 26 and 27 show that increases of habits in new societies are greater than increases in habits in closed societies. Test 28 suggests that habits increase relatively more frequently in new than in closed societies. Accept the argument.	27	10	H_0 and H_1 are the same as in Test 26	$t = 3.152 > t^*$, df:58; reject H_0
	28	9 & 10	H_0 : Increases of habits occur with the same relative frequency in closed as in new societies. H_1 : Increases of habits do not occur with the same relative frequency in closed as in new societies.	$\chi^2 = 4.642$, df:1; reject H_0
10. Habits continue to range in open societies around levels reached in preceding new societies.	29	9	$H_0: A_{23} = \bar{x}_{B23}$ $H_1: A_{23} \neq \bar{x}_{B23}$	$t = .646 < t^*$, df:8; reject H_1
Three of the tests, that compare habits produced in open societies to averages of habits produced in preceding new societies, support the argument. Since habits range widely in open societies, their occurrence is only roughly predicted by the production of habits in new societies. Accept the argument with caution.	30	10	H_0 and H_1 are the same as in Test 29	$t = 3.210 > t^*$, df:8; reject H_0
	31	9	$H_0: A_{13} = \bar{x}_{B13}$ $H_1: A_{13} \neq \bar{x}_{B13}$	$t = 1.404 < t^*$, df:8; reject H_1
	32	10	H_0 and H_1 are the same as in Test 31	$t = 1.596 < t^*$, df:8; reject H_1
11. Habits continue to range in closed societies around levels reached in preceding new societies.	33	9	$H_0: C_{33} = \bar{x}_{B33}$ $H_1: C_{33} \neq \bar{x}_{B33}$	$t = .168 < t^*$, df:8; reject H_1
The tests conflict. Reject the argument.	34	10	H_0 and H_1 are the same as in Test 33	$t = 2.463 > t^*$, df:8; reject H_0
12. Habits continue to range closely in closed societies around levels reached in preceding open societies.	35	9	$H_0: C_{13} = \bar{x}(\text{habits, Epoch } V, \text{Experiment } 4)$ $H_1: C_{13} \neq \bar{x}(\text{habits, Epoch } V, \text{Experiment } 4)$	$t = 1.088 < t^*$, df:11; reject H_1
The tests support the argument; the number of habits expressed in the terminal epoch of an open society appears to be a good prediction of subsequent productions of habits in a closed society. Accept the argument.	36	10	H_0 and H_1 are the same as in Test 35	$t = .984 < t^*$, df:11; reject H_1
13. Culbits tend to increase relentlessly under all social circumstances.	37	9	$H_0: I_C = I_B = I_A$ $H_1: \text{any } I \neq \text{any other } I$ where increases of culbits are represented as follows: I_C : increases in closed societies, I_B : increases in new societies and I_A : increases in open societies.	$F = 1.310 < F^*$, df: 2 and 186; reject H_1
The tests support the argument. Tests 37 and 38 indicate that increases of culbits are not significantly greater in new and open societies than in closed societies. Test 39 shows no significant differences in the count of increases in the three sorts of societies. Accept the argument.	38	10	H_0 and H_1 are the same as in Test 37	$F = 2.824 < F^*$, df: 2 and 186; reject H_1
	39	9 & 10	H_0 : Increases of culbits occur with the same relative frequencies in closed, new and open societies. H_1 : Increases of culbits do not occur with the same relative frequencies in closed, new and open societies.	$\chi^2 = .995$, df:2; reject H_1

functions extensively, and they are not analyzed here. Logically and perhaps actually they can confound our analyses of the relations of borrowings, habits and culbits to social situations. On this account several conceivable arguments on these dependent cultural responses are not attempted in Table 3.

FINDINGS

The following relations of culture to society appear to be indicated in the four experimental histories.

1. Invention is always curbed in open societies.
2. Entrance into new societies brings about immediate decreases in invention.
3. Invention is fostered in closed societies that follow closed societies; it is curbed in closed societies that follow open societies. It thus seems that the interference with invention of open societies carries forth into closed societies.
4. Culture borrowing increases immediately following experience in new societies.
5. The level of borrowing reached after experience in new societies is maintained in succeeding open societies but not in succeeding closed societies.
6. The increase of habits in new societies is greater than the increase of habits in closed societies.
7. Habits appear to range widely in open societies around levels reached in preceding new societies; they range closely in closed societies around levels reached in the terminal epochs of preceding open societies.
8. Culbits tend to increase relentlessly regardless of social circumstance.

In general, as mobility follows isolation, borrowing displaces invention; as a new order of isolation succeeds an old order of isolation, both borrowing and invention are maintained; and as isolation displaces mobility, both borrowing and invention disappear.

The relations of habits and culbits to social situations are not clear. Culbits especially reveal no direct relations. Since habits tend to hold level under some social circumstances and culbits tend generally to increase, they each display unique patterns of cultural response. Thus habitual copies of inventions and habitual copies of borrowings appear as different cultural phenomena.

The succession of closed societies of Ex-

periment 3 stands out as an experimental history that favored creativity in culture.

COMMENT

Swanson has argued persuasively in favor of laboratory experiments in sociology.⁵ Keesing has noted that experimental studies of culture are in the making.⁶ Bartlett's studies of remembering⁷ and Larsen's study of rumor⁸ may be taken as examples of laboratory investigations having to do with cultural processes. Robert's investigation of three Navaho families represents a field record of the culture of small groups.⁹ Experimental approaches to culture have been started.

This study of experimental histories of culture is a first attempt at the outright production of culture in the laboratory. As contrasted with the studies of rumor that treat of the wearing away and distortion of culture that proceed as each rumor advances farther and farther away from its source and referent, this has been an investigation of provocations of cultural development. We found marked effects of social structure on cultural development.

Experimental controls and simplifications always produce toys. Every experiment, regardless of subject or technique, is a delicate toy in which carefully selected and manipulated mechanisms are operated under arranged conditions. These toys may or may not be replicas of uncontrolled actualities found outside of the laboratory. And they may or may not work outside of the laboratory. Our miniature histories were ar-

⁵ Guy E. Swanson, "Some Problems of Laboratory Experiments with Small Populations," *American Sociological Review*, 16 (June, 1951), pp. 349-358.

⁶ Felix M. Keesing, "Culture Change, An Analysis and Bibliography of Anthropological Sources to 1952," *Stanford Anthropological Series*, No. 1, 1953, p. 76.

⁷ F. C. Bartlett, *Remembering. A Study in Experimental and Social Psychology*, New York: Cambridge University Press, 1932.

⁸ Otto N. Larsen, "An Exploration of the Accuracy of Message Content in Rumor Chains," Mimeo-graphed Report, Washington Public Opinion Laboratory, Spring, 1952.

⁹ John M. Roberts, "Three Navaho Households: A Comparative Study of Small Group Culture," *Papers, Peabody Museum of American Archaeology and Ethnology*, Vol. 40, No. 3, 1951.

ranged as replicas of commonplace social situations conducive to cultural production. Since cultural phenomena were actually brought about in the experiments and not merely simulated, the miniature histories appear to be operational replicas. The matter of these particular replicas working outside of the laboratory has not been established.

But the experiments do raise questions as to the actual workings of culture in history. Our most disturbing discovery was the creativity of isolated groups. The stimulation and novelty of experience in open social settings did not increase cultural creativity in the experiments. The experimental demonstration of the coincidence of social closure with cultural invention poses the problem of the extent of their association in

history. There are plausible examples of socially restricted creativity in schools of art and thought, in golden ages and recurrent clusterings of all sorts of distinguished achievement. But the great example of mobile and cosmopolitan urban populations having made the most of cultural change runs counter to our experimental results. We should hesitate to extend these results without qualification to a general interpretation of all cultural accomplishment. However, our results do give reason to question any bland presumption that social mobility leads inevitably to cultural creativity. We should now be more careful to search for explicit circumstances under which either isolation or mobility may contribute to the production of culture.

DIFFUSION IS PREDICTABLE: TESTING PROBABILITY MODELS FOR LAWS OF INTERACTION *

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WHAT FACTORS AFFECT DIFFUSION? THE DIMENSIONAL CANDIDATES

THE Air Force has dropped several billion leaflets in wartime—with effects that are not precisely known. It will be responsible for further leaflet drops in future conflicts. It needed research, therefore, on how to maximize the diffusion of leaflet messages and compliance with their instructions by the target populations. It wanted to learn the generalizable and manipulatable conditions for predicting and producing diffusion and compliance. This leaflet project on message diffusion offered the Public Opinion Laboratory resources for exploring its di-

mensional analysis and the interactance hypotheses part of it, through controlled experiments.

Message diffusion is but a one-way person-to-person form of interaction. Message diffusion is, furthermore, an observable and experimentable sub-form of social or cultural diffusion in general. Our interactance formula,¹ or general model, for any single kind of group behavior-in-context analyzes human interacting into six dimensions or classes of factors. The simple group behavior of spreading an attribute (defined as any all-or-none characteristic) was here studied as an example of a unified field of social

* Revised version of paper read at the American Sociological Society meetings, September, 1954.

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¹ S. C. Dodd, "The Interactance Hypothesis—A Gravity Model Fitting Physical Masses and Human Groups," *American Sociological Review*, 15 (April, 1950), pp. 245-256. The fuller development of dimensional analysis in the social sciences, of which Project Revere was an item, may be found in the author's *Dimensions of Society*, New York: Macmillan, 1942; and *Systematic Social Science*, Seattle: University Bookstore, 1947. The details of the researches reviewed here may be found in the 44 published articles (bibliography on request).

forces.² This field was factored into the six general dimensions of (1) the *behavior* of (2) *people* in (3) *time* and (4) *space* when internally stimulated or (5) "motivated" and externally (6) *stimulated* in specified ways.

The criterion behavior to be predicted was the *diffusing* of a leaflet message—usually dropped from airplanes. A secondary criterion was the *compliance* by the public with the leaflet's instructions to fill out and mail back a postage-free tracer stub attached to every leaflet. Diffusion was measured, either in polls of probability samples or by mail-backs, as the per cent of persons knowing the message at any one time. The all-or-none (1) act of telling the message orally or passing on a leaflet and the all-or-none (2) react of hearing (and remembering) it constituted a "tell-hear" interact.

A prime methodological interest of this research was in the homogeneity of these six classes of factors or "sectors" in the human sciences. Is each class sufficiently homogeneous so that principles found to hold for one variable or index in a class will hold for the whole class? This is often the case for the three elementary sectors of space, time, and number of people, but is it the case for the compound sectors of behavior, motivations, and stimulations?

WHAT CURVES MEASURE DIFFUSION? THE EMPIRICAL FITS

The chief question throughout Project Revere was at first: What is the chief relation between diffusion and each factor alone? This breaks down into three sub-questions: What is the *shape* of the curve relating them? How *closely* does that curve fit the data? What is the *statistical significance*, or probability of recurrence, of that closeness of the fit? The answers to these questions for the six interactance factors will be summarized in turn as far as Project Revere found answers.

The Activity Factor in Diffusion. The diffusion index, defined as the proportion of message knowers in a population, developed

² See S. C. Dodd, "A Theory for the Measurement of Some Social Forces," *Scientific Monthly*, 43 (July, 1936); "Standard Error of a Social Force," *Annals of Mathematical Statistics*, 7 (December, 1936).

the chief parameter of our models as a "potency" index. The "potency" was defined as the acts-per-actor or new tellings-per-teller. A potent message is an oft told one; an impotent message is seldom retold. The potency rate or speed (acts per actor in a period, A/PT) became the most useful predictive index of diffusion. The acceleration of the potency rate in a population defined the *social force* exerted by the leaflet operator. The potency of any message depends not only on the message content but also on the population and situation. The same content could have different potencies in war or peacetime, in enemy or friendly populations, etc.

This potency rate should itself become predictable. But our attempts to predict it from attitude tests and ratings were not clean enough to yield any firm generalizations beyond the situations studied.

The Population Factor in Diffusion. How, next, did diffusion depend on the number of persons in the target population? What was the shape of the curve relating the diffusion index to the size of the population in a series of towns? The answer seems to be a logarithmic curve in terms of absolute diffusion, or a hyperbola in terms of relative diffusion. (When the hyperbola is expressed in discrete units, it becomes the harmonic series or reciprocals of the natural numbers.) This was evidenced by a close fit ($r=.99$) but with statistically significant discrepancies (at the 5 per cent level) in one test on six towns ranging from 1,300 to 328,000 population. The harmonic model here accounted for 98 per cent ($=r^2$) of the variance of the data, but the remaining 2 per cent of discrepancy was apparently due to a systematic error in one town and was not attributable to sampling fluctuations. When one leaflet per person was evenly scattered by airplane at mid-day on each of these six towns, the number of mailbacks tended to increase with the size of town but with diminishing increments. This was a logarithmic relation of absolute diffusion to town size.

In these towns the more the people, the more the absolute response, but the less the relative response. The mailback per capita rate tended to vary inversely with the town's population. It dropped from 10 per cent in

the smallest town to 3 per cent in the largest town several hundred times larger.

We hypothesize the following "overlying" rationale towards explaining this diminishing returns trend: that as towns get larger, they generate more than proportionate *interstimulation* per capita. The leaflet stimulation (being constant at one leaflet per person) would then shrink relatively to all the stimulation playing on each person. The diffusion response per capita would thus necessarily shrink as the towns enlarged. This overlying explanation and alternative hypotheses can, we believe, be experimentally tested in further models designed to isolate them.

The Time Factor in Diffusion. How does the diffusing depend upon the time elapsed? The answer here with close and significant fits from a dozen tests was that, under conditions of steady and equal opportunities, the diffusion tended to grow in plurels in a decaying exponential or convex upward curve, and in groups in a linear logistic or S-shaped curve. In the experiments with cleanest controls, the correlation of model and uncumulated data exceeded .99 with discrepancies that were statistically non-significant at the 5 per cent level.

In a plurel, the reactors to the mass stimulation of leaflets falling from the sky reacted by picking up leaflets and reading them. This "physical diffusion," as we call it, grew deceleratingly. Its rate of growth waned as time passed, with fewer and fewer non-knowers left to pick up leaflets. Furthermore, the stimulation waned within the hours of one day, since leaflets were soon entirely removed from the streets. The children especially delighted in collecting them and even tried to sell them to our observers.

In a group, however, the interactors told or showed the message to each other. The S-shaped logistic curve of knowers rises slowly at first when there are few tellers active, then accelerates to its maximum slope when half the population know and half don't know, and then decelerates as the few non-knowers become harder and harder to find. This particular curve or probabilistic diffusion model is simply the cumulation in successive periods of the "most probable" increments. The logistic curve is thus the most probable growth

curve for interaction in pairs in any large and homogeneous population of molecules, mice or men, wherever many independent influences determine the transfer of the attribute.

The Space Factor in Diffusion. How, next, did diffusing depend upon the distance intervening between tellers and hearers? The answer here is an harmonic or die-away curve observed in several tests with close and significant fits. The diffusing waned with distance. The further the message traveled, the fewer the people who knew it. The rule was: "Nearby, many hear; far off, few hear."

For example, in "Operation Coffee," one of the cleanest tests in Project Revere's twenty-seven diverse tests, the diffusion varied inversely with distance as follows. On a Monday morning, interviewers told a coffee slogan to a random 17 per cent of housewives in a town of 950 inhabitants. The housewives were further told that anyone knowing the coffee company's new slogan at a census of households on Wednesday would get a free pound of coffee. With this bait and with the mass media controlled, the slogan spread exclusively by word of mouth to 82 per cent of the housewives in forty-eight hours. Our interviews in the census traced all links including the inter-home distances of each hearer and her teller. The distribution of these distances in 125 pairs of interactors fitted an harmonic curve with a closeness of fit correlation of .99 and with nonsignificant discrepancies by the chi square test at the 5 per cent level.

The explanatory rationale or preconditions for the inverse distance curve are fairly well known. They can be stated in differing terms such as Zipf's "least effort" explanation, a mathematical "random walk" explanation, a "counter-acting part of a constant whole" explanation, our geometric "radial zones" explanation, etc. Of these variant versions perhaps the radiant zones version is most universal as it explains the effect of distance, we believe, alike in Newton's law of gravity and in demographic gravitation or social diffusion from a point.

Briefly, suppose a particle (or person or any entity) has a constant amount of energy (or social influence of any one sort) which is equally likely to diffuse in any direction. Draw concentric zones of equal widths

around the particle (zones in a volume, or in a plane, or along a line give the same result). The space in each zone can be proved geometrically to vary directly with its distance (radius) from the particle. Since the constant energy was assumed to diffuse evenly, it will become divided into smaller amounts per unit space the further out it goes. The energy per unit space at distance L will then be inversely proportional to L , i.e., it will vary as L^{-1} , which is the harmonic series. For simplest social diffusion, one assumes that the potency is unity and that the people are uniformly distributed in the area as in a homogeneous residential section of a large city. (Varying potencies and densities complicate the model, of course.) Then the proportion of people influenced in each zone will necessarily be inverse to that zone's distance from the origin point.

The Values or Motivational Factor in Diffusion. How did diffusing depend on the population's values (operationally defined as what pollees say they want)? The answer here is an indication of a linear relation but with loose and unsure fits and some ambiguous evidence too intricate to review here.

It seems to us that the values sector composed of all indices of human desiderata is still too internally diverse a class of variables to permit many generalizations about it from our few indices of unknown representativeness and when observed under incompletely specified situations. Much fuller search for the preconditions of valuing behavior is needed. (A comprehensive "valence model or theory" aimed to fill this need is presented in Chapter 60 of *Revere Studies on Interaction*.)

The Stimulation Factor in Diffusion. Finally, how did diffusion depend on the strength of the stimulation (measured in per capita leaflets dropped)?

The answer is a logarithmic relation observed in two testings with close and significant fits. The public's response increased with the logarithm of the stimulus. Another way of stating this is: "To add a unit of response, multiply the stimulus by a constant." In eight roughly matched Washington towns, the leaflets per person were doubled at each step, starting the series with

1 for 4 persons, and ending with 32 per person. The response, measured by the per cent of people who heard the message, went up in about equal increments of 9 per cent for each doubling of the stimulation. This is the Weber-Fechner law in sensory psychology of individuals, found to hold in the cognitive responding of whole communities here. The closeness of fit correlation was .97. Thus, the logarithmic model or curve here accounted for 94 per cent of the variance of the data ($r^2=.94$). The remaining 6 per cent of unaccounted for variance may have been due to sampling fluctuations, since the chi square test showed these discrepancies from the log hypothesis to be not significant at the 5 per cent level.

Although this logarithmic relation had been predicted by publishing it earlier as an expectation, yet it is largely an empirical finding still with inadequate rationale. We expect that it will be reobserved whenever leaflets of any one kind in geometrically increasing numbers are dropped over matched towns in any culture. But exactly why this will be so, or how nearly so it is likely to be in new situations that differ in observable ways and degrees from those hitherto observed, we cannot yet say with confidence.³

Summary of the Factors of Diffusion. In summary, Project Revere found that interacting, when observed in its sub-form of message diffusing here, and under the probabilistic and other specified preconditions with each factor isolated in turn, tended to vary:

³ The unusually close and significant tests of fit observed in the cleanest of our studies in Project Revere call for a footnote. Closeness of fit correlation coefficients exceeding $r=.99$ in uncumulated data and some of the other indices of fit seemed to us unbelievably high for sociological data. Since they recurred repeatedly, but in only our best controlled experiments, and after the possibility of computational errors, spurious r , too few degrees of freedom, etc. had been eliminated, we believe they accurately reflect the phenomena. We predict they will recur if observed under the unusually favorable methodological conditions of Project Revere, such as unusual resources in funds and authority, usually clear-cut dimensional models to test, and unusually controllable stimuli and responses. Altogether we believe that Project Revere was a demonstration that the sociologist, if given research resources comparable to those given physicists, can increasingly produce results of comparable exactness and predictivity.

- 1.* linearly with the earlier *acts* and *reacts* of telling and hearing (as a definitional result);
- 2.* linearly with the *values* or asserted wants of the target population (as an empiric finding in one study);
- 3.* linearly perhaps with certain *demographic and other conditions* (as hints of empiric findings when better tested);
4. harmonically with the *distance* the message travels (as a clear empiric and rational finding from several studies);
- 5.* harmonically (as to speed) with the *time* since it started, i.e., from a dated stimulus (as a general empiric and rational finding from a dozen studies);
6. logarithmically with the total *stimulation* in an unlimited range (as a clear empiric finding in two studies);
7. logarithmically with the *population* in town size (as an empiric tendency in one study);
8. exponentially with the *time, in plurels* (as a clear empiric and rational finding in two studies);
9. logically with the *time, in groups* (as an empiric and rational finding in a dozen studies);
- 10.* harmonic exponentially with *time, in plurels*, if with a "dated" stimulus (as an empiric and rational finding in one study);
- 11.* harmonic logically with *time, in groups*, if with a "dated" stimulus (as an empiric and rational finding in twelve studies);
- 12.* normally from *person to person* under multiple stimulation (as an indicated but not tested empiric and rational finding from several studies);
- 13.* log normally with *time*, under multiple and waning stimulation (as an indicated but untested empirical and rational finding from two studies).

Each of the above relations names a shape of curve which is specified exactly by its formula. The dimensional formulas specify only the *shape* of curve relating the predictive factor to the predicted diffusion. The statistical formulas also specify the *slope* and *location* of each curve within a family of shapes. The dimensional formulas specify only the basic variables and their exponents, neglecting the details of coefficients and addend parameters of the statistical formulas. The summary above, there-

fore, states the general findings relating diffusion to its contextual factors when stripped of detail peculiar to the particular indices and situations studied.

WHAT PRECONDITIONS EXPLAIN DIFFUSION? THE PROBABILITY HYPOTHESES

Four Criteria for Preconditions. The fits of curves to diffusion data in Project Revere were reviewed above, mostly at the empirical level. But scientists try to go deeper and develop hypotheses on the rational level. These state the preconditions for each empirically observed fit and so permit predicting its recurrence in new situations where those conditions exist.

In modeling we searched for conditions of greatest possible universality or invariance. We tried to state the necessary and sufficient preconditions in terms transcending differences in personality, social situation, or culture with which sociologists are so largely concerned. We even tried to transcend the social sciences and to state the conditions for any model in dimensional or mathematical terms, so as to be general to the content of any science. We used four criteria in looking for the ideal terms in which to formulate preconditions and models. The variables and the preconditions relating them should be so chosen and stated as to be: (1) reliably observable, (2) predictive, (3) universal, and, therefore, (4) culture-free.

We believe these four criteria have been achieved to a high degree in our diffusion models, by means of probability theory and our dimensional theory of actance. Let us see how.

First, we *defined* the diffusion variables as involving solely the three dimensions of *actors acting in time*.

In the case of diffusing messages, the actors are persons, the acts are tellings and hearings whose end product is the attribute "knowing the message" and the time is the period of diffusing. These basic variables or dimensions thus defined, whether for human or non-human diffusion, can be observed with suitable instruments, we submit, reliably, predictively, universally, and free of cultural differences.

Three Preconditions for Diffusion of an Attribute. Next we assumed just three culture-free preconditions among the dimen-

* The starred items are not discussed in this paper.

sions of acts, people, and time. These conditions specified: (1) the number of attributes, whether 1 or more; (2) their distribution in the *population*, whether randomly, equally, or otherwise; (3) their distribution in *time*, whether steady, waning, waxing, or otherwise.

The normal probability curve assumes *many, random* acts in any time distribution. The exponential growth curve assumes *one random steady act*. The linear logistic growth curve assumes *one random steady pair* act. The italicized words in the last three sentences specify the necessary and sufficient social preconditions, or mathematical assumptions, under which the curves named will occur. We stress again that words such as "one," "many," "random," "steady," and "pair" are general to any field of science.

These behavioral preconditions of diffusing are expressed algebraically as the *assumptions*. From these the model proper, such as an algebraic formula or a geometric curve, is mathematically derived. This model is then hypothesized to fit the data—insofar as the data were actually conforming to the specified behavioral preconditions.

The fit does not check the derivation of the model from its assumptions and from the definitions of the variables, for that is a matter of logical and mathematical proof. *The indices of fit tell how fully and independently the behavioral preconditions, expressed mathematically as assumptions, may exist in the situation observed.*

The Randomness Precondition. The essential precondition in Project Revere models was randomness. The attribute was assumed to diffuse in chance-like or equally probable ways through the population. The models were probability structures. The problem of predicting the diffusing was reduced to observing or testing the preconditions—and eventually their preconditions in turn.

The preconditions of randomness are (roughly) *many, small, independent* influences or multiplex determiners, with none dominating. This implies a population that is homogeneous relative to the stimulation at issue or else one so heterogeneous that its many determiners are each a small share of the total. Thus, when a plane spreads leaflets evenly over a town, the distribution of that attribute (i.e., knowing the message) may

be random insofar as many small different events (and only these) determine whether or not each particular person sees a leaflet. Then, from this random distribution as a baseline, single large determiners—such as being out-of-town, or being unable to read, or having children who delight in gathering leaflets—will produce measurable departures. The more fully the model includes such non-random factors also, the more fully it should fit the data, of course.

The reader is warned not to think of randomness as necessarily opposed to purposeful, planned, or customary behavior. It can be all of these simultaneously in a population. Acts that seem highly purposeful *to the individual*, such as the appointments he makes to see people in the course of a day, may also be randomlike *in the aggregate* in a large population. Person A's purposive meeting of B may have n different determiners. If each person, on the average, has m daily meetings and there are P persons in the population studied, then the total number of different influences determining meetings may be of the order of $n \times m \times P$. These influences may be in the millions but need only be a few hundred to result in distributions that fit random specifications closely. Even though some of the influences are correlated and so are not random (as when people in one place of work are more likely to see each other than to see other people), yet if there are many of these internally-correlated clusters (such as places of work), the aggregate effect can still approximate randomness. Random causation, in short, should be thought of not as irregular and chaotic but as *multiple and diverse* causation where every cause is but a small share of the total causation. Many bits of purposive behavior, if somewhat independent of each other, appear in the aggregate like random behavior. The "granules" in such "granular causation" may be regular, law abiding, predictable, and still behave randomly in toto if only the "granules" are sufficiently many, small, and different.

The chief social implication of randomness is that it is a highly "democratic" situation, as far as that term connotes equality of opportunity. If an attribute is randomly distributed in a population, it means that every person has a mathemati-

cally equal opportunity to possess it. Thus, a well fitted logistic curve reflects a highly democratic equality of opportunity in respect to the interacting at issue. In this way modeling in social sciences can measure a community's degree of democracy in specified respects and guide the producing of such democracy. The three preconditions for the logistic growth curve—namely random, steady, pairings—can be less exactly restated in social terms as roughly a "democratic," "stable," "individualistic" community. But these terms have many other connotations unwanted here. The logistic curve's preconditions may be loosely stated as existing "Whenever an attribute spreads steadily from person to person with equal opportunity for everyone." Insofar as a community is "autocratic," "changing," and "organized," it may deviate from the logistic model—*provided* that the meanings of the respective words in quotes are limited to the opposite of "random, steady, pairing." Of course, the adjectives "democratic," etc. apply only in respect to the measured attribute. To be generally "democratic," etc. requires logistic fits for a representative sample of attributes in that culture. A composite logistic model could be constructed, we believe, to reflect how "democratic" "mature," and "uncentralized" a given community may be according to a set of representative and standardized indices which could then serve to define these concepts operationally.⁴

The words "probability" and "random" apply strictly to populations and not to persons. A probability is a proportion or arithmetic mean of an attribute. It is no

⁴ These social implications of randomness in simple group behavior may prove to be relatable to the randomness Ashby notes in the behavior of a brain. He developed a model for a brain or any system that has maximum probability of quick and effective adapting to *new* situations. This model for a brain seems also applicable to a human society as an entity that can learn or destabilize itself after unforeseen events (including destruction of a part of itself) as no current machine can do. This design for a brain has the four features of (1) many, (2) "part functions," and (3) "step functions," (4) all *randomly* combined. His lucid and brilliant argument, however speculative in spots, still seems to us well worth sociologists' studying and reducing to elemental experiments as we have tried to initiate in Project Revere. See Ashby, W. Ross, *Design for a Brain*, New York: Wiley, 1952, 260 pp.

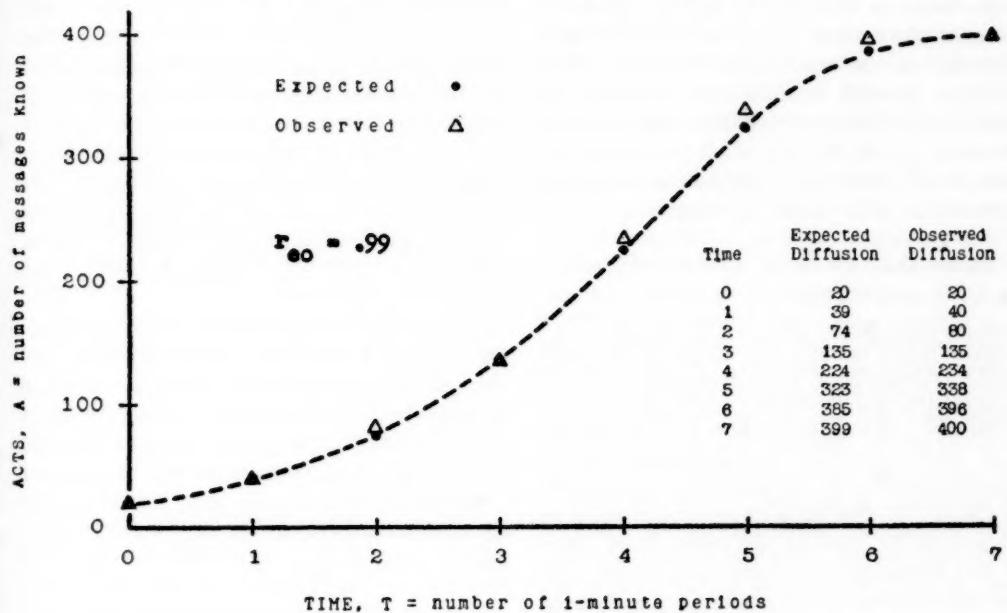
more applicable to one person than is an "average for one person."

An Experiment Testing the Preconditions for the Logistic Model. Consider an example of a fully rationalized diffusion model. We have clarified the preconditions of the linear logistic model, namely, *steady pairing with equal opportunity* so fully now that they can be demonstrated in a classroom experiment on laws of social interaction. The discrete form of the logistic formula may be approximated as a continuous curve (as shown in Figure 1). This curve predicts how n messages will diffuse through the P persons in the class if the messages spread randomly and steadily by pairing. Figure 1 reports a classroom experiment. The resulting S-shaped growth curve should be within sampling limits of the curve expected by the logistic formula. The expected and uncumulated observations correlated .99 with the model. The small discrepancies were attributable to chance at the 5 per cent level. This shows that the preconditions of random, steady interacting existed solely and fully in this situation. This had been experimentally assured by having each of the twenty students tell his birth date as one message, thus starting twenty simultaneous "rumors." In each successive period of two minutes they paired off, thus interacting in pairs at a steady rate. They paired off randomly as assured by drawing their names in pairs from a well shuffled pack of cards. At each pair meeting each student copied into his record sheet all the "messages" on his partner's record sheet. This fixed the probability of "telling-if-met" (the k in Figure 1), or acts per actor and period, at unity for each message. At the end of each two-minute period a quick tally on the blackboard of the total number of messages known, as recorded on all record sheets, followed the expected curve with the closeness shown in Figure 1.

Here in the logistic model for simple group behavior the preconditions—random, steady, pairing—are stated in reliably observable, perfectly predictive, universal, and culture-free terms, as our criteria called for. Whatever the behavior; whoever the group; whenever and wherever they act; however the motivations, stimuli or physical causes may affect them; an S-shaped logistic growth curve will invariably occur *insofar as the*

FIGURE 1. LOGISTIC MODELING FOR DIFFUSION

The linear logistic law of a joint probability cumulating in time demonstrated as a classroom experiment in human interaction.



- 1 DEFINING the VARIABLES: a 3 dimensional closed system of *Acts by People in Time*
 - A = any all-or-none interact e.g. telling-and-hearing a message, $A = 1, 0$
 - P = actors and reactors or interactors $p + q = 1$
 - e.g. p = proportion of knowers (interacted-on persons) q = nonknowers
 - T = number of time units T_i = an identified unit-period
- 2 ASSUMING the PRE-CONDITIONS: a. *Random* meetings e.g. pq by law of joint probability
b. *Steady* acting e.g. 1 act per person in a period = "potency rate," k (= 1 here)
- 3 DEDUCING the MODEL: $\sum \Delta p_{i+1} - \sum k p_i q_i$ i.e. each period's increment, Δp , equals the previous period's variance, pq , or probability of knower meeting nonknower (times the activity rate, k , for the given situation)
- 4 TESTING EXPERIMENTALLY: 20 persons, each with a message, heard all 20 messages by random meetings in pairs in 8 minute-periods
- 5 TESTING the FIT STATISTICALLY: Expectations correlated with uncumulated observations at $r = .99$
Discrepancies were nonsignificant $\chi^2 = 5.640$ $.3 < p < .5$

attribute spreads solely by random, steady, pairings. This principle applies to fruit flies in bottles, or to populations of nations, or to molecules of a gas, or to people telling a news item or communicating any new culture trait.

Whenever a theory in science analyzes any phenomena so fully as to permit synthesis of those phenomena, that field of science is maturing as an exact science. When social diffusion theory enables the scientist to measure, predict, and produce that diffusion to order under its specified preconditions, then this subfield of dimensional sociology seems to us to be "coming of age."

WHAT LAWS PREDICT DIFFUSING? THE MOMENT-POWERS MODEL

The empirical and rational inquiries on social diffusion sketched above led to formulating a system of candidate laws of social diffusion. This system is summarized in a simple formula or dimensional model described below. It requires only three letters to specify it. But first let us try to state as formal social laws of diffusion three cases of this summarizing dimensional model. Let the well-known normal probability curve, the decaying exponential curve, and the linear logistic curves be formally stated as examples with their social preconditions stated explicitly in reproducible form and in degrees in the "insofar as . . ." clauses.

The Normal Probability Law in Diffusing. Let the normal probability formula be stated in prose and in manipulatable terms as follows:

"Insofar as many, small, different attributes, each as likely to be present as absent, mix thoroughly in a population, their sum will tend to follow the binomial distribution and the normal bell-shaped distribution curve as their number gets large. (This curve is most simply defined by its differential equation $dp/dt = -kpt$ where dp/dt = the growth rate, k = a constant, p = the 'knower' proportion of the population, and t = time.)"

This normal model differs from the next two diffusion models to follow in this "power-moments" system in that: (a) it assumes t interchangeable attributes, whereas the exponential and logistic models assume but one attribute, and (b) it represents a growing series of complete distribution

curves, not a growing series of frequencies of one curve.

It can be socially generated in a series of periods if mass media communicated a different item of news or advertising to a random half of the population on each of t successive days. At any t^{th} day a t^{th} order binomial distribution of items known to the people up to date would tend to result. The items must be independently communicated to be random, of course, regardless of whether they occurred on successive days or all at once. A single mass medium or monopoly of communicating introduces correlation and measurable loss of randomness as compared with having many different competing sources of information with none dominating the others.

The Decaying Exponential Law in Diffusing. "Insofar as all-or-none reacts of one kind in a plurel reacting to some common stimulation are distributed with somewhat equal opportunity for all the population and occur at a steady rate per person throughout a period, their sum will tend to follow the convex-upwards decaying exponential curve. (This is defined by its differential equation $dp/dt = kq$, where $q = 1 - p$.)"

This mathematical exponential law may be called a social law when the attribute diffuses among people. Its right to be called a scientific "law" stems from the mathematical certainty that it will invariably follow upon the specified preconditions. As usual throughout science and engineering, the question is to make sure in applying any law that its preconditions hold fully and solely in the situation at issue. If this applicability is in doubt, it may be less controversial to call it a "model" rather than a "law," since any model explicitly includes tests for its own applicability or "fit."

The Linear Logistic Law in Diffusing. "Insofar as all-or-none person-to-person interacts of one kind are distributed randomly, i.e., with fairly equal opportunity for everyone in a population, and the persons meet steadily in time, the sum of the interacts will tend to follow the S-shaped linear logistic curve. (This is defined by the differential equation $dp/dt = kpq$.)"

The simplest logistic curve is generated algebraically as the cumulation over t periods of the joint probability, pq , of

knowers meeting non-knowers in each period (see Figure 1). It is socially generated by mixing knowers and non-knowers fully and freely, i.e., with equal opportunity for anyone to interact with anyone in each of the t periods.

Again, the "logistic model" connotes more than the "logistic law." For modeling explicitly connotes:

1. operational defining of the variables so as to be reliably reobservable;
2. explicit statement of the social preconditions as mathematical assumptions;
3. rigorous derivation of the formula or model proper exclusively from those definitions and assumptions;
4. specification of the experimental and statistical tests of fit.

A model is thus a theory spelled out in fully testable terms. It includes a system of hypotheses, where "*an hypothesis*" is defined as a statement of an expected and testable relation among variables. The primary hypothesis expects the whole model or set of preconditions to fit the data; the secondary hypotheses expect each precondition in isolation to hold and so to contribute to the total predicting.

The "Power-Moments" Model. In trying to synthesize the models, or operationally specified theory of diffusing (as developed in Project Revere), a brief dimensional formula was discovered. It is "the t^{th} power ($t = \text{time}$) of the m^{th} statistical moment of an attribute, A," namely:

$[A^m]^t$ the "moment-powers" model (in dimensional form)

The square brackets denote a dimensional formula, i.e., one dealing with basic variables and their exponents and neglecting details of coefficients (i.e., units) or addend parameters (i.e., origin points) in order to specify generic shapes of curves regardless of the local accident of their variant slopes and locations.

The behavioral meaning of this formula is: "Observe the attribute as some form of probability (specified below) in the population, then mix the people thoroughly t times to make that probability grow in time." The model thus describes the spreading of an attribute under probabilistic conditions.

When the observing is at one time only (so $t=1$), and as the exponent m varies, this model becomes the formula for simple probability (p), complementary probability

(q), alternative probability ($p+q$), null probability (o), joint probability (pq), a difference probability ($q-p$), etc.⁵

Next, when a time series or growth curve of dynamic probabilities is studied (so $t > 1$), the moment-powers model describes as important special cases: (1) the diffusing of many items within each person of a population in a bell-shaped normal probability curve (developed from $p+q$), or (2) the diffusing of one item through a plurel in a convex upwards exponential curve (developed from q), or (3) the diffusing of one item through a group in an S-shaped logistic curve, (developed from pq), etc. This means that if one knows whether there are one or many attributes in the stable and relevantly homogeneous situation studied, and knows whether the attributes spread within persons, or in a plurel (as from mass media), or in dyadic groups (as from conversational pairs of persons), then he can predict respectively that the diffusion will grow in a normal, or exponential, or logistic curve. We further hypothesize that the third and fourth moments of the attribute growing in time will be found, when explored and tested, to describe diffusion in pro-con plurels and groups respectively.⁶

In conclusion, any reader interested in the unity of science should note that these diffusion models transcend social diffusion and describe simple forms of diffusion in any field of science. The moment-powers formula predicts the shape of the diffusion curve of any attribute(s) whatever through any population of entities if only the opportunities are sufficiently stable and equal for all entities.

⁵ For details see S. C. Dodd, "A Dimensional System of Diffusion Models," (to appear). A paper read at AAAS meetings, December, 1954.

⁶ A more inclusive "power formula" for diffusion was developed by adding a script, a , for the number of attributes to the moment-powers formula. (See footnote 5.) This becomes a "conic powers" formula which as m becomes $0, -1, -2$ defines respectively linear, logarithmic and harmonic or hyperbolic diffusion curves. Thus this versatile "power formula" includes both the "moment powers" and the "conic powers" in its families of diffusion curves. According as the four corner scripts in this formula vary, it becomes the harmonic, logarithmic, linear, parabolic, normal, exponential, logistic, or other common type of simple curve. All these curves were observed under specifiable conditions in Project Revere but can only be noted here in passing.

MIGRATION AND OCCUPATIONAL MOBILITY IN NORRISTOWN, PENNSYLVANIA *

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INTRODUCTION

NORRISTOWN, Pennsylvania, a medium-sized city twenty miles northwest of Philadelphia, is currently the focus of an intensive study of the changing size, composition, and demographic behavior of its population. This is a report on one phase of this overall study—an attempt to utilize local data to determine the changing patterns of occupational mobility among the male members of the Norristown labor force over the last forty years and to determine what relationship, if any, exists between these patterns of occupational mobility and the patterns of migration into and out of Norristown. For purposes of analysis, four time periods were used: 1910-1920, 1920-1930, 1930-1940, and 1940-1950.

DATA AND METHOD

The labor force of an industrialized locality such as Norristown undergoes continuous changes in size and in composition. Among the factors contributing to these changes are: (1) selective migration into and out of the area; (2) the entrance of new persons into the labor force as the children of residents reach adulthood, and the exit from the labor force of residents who become disabled, who retire, or who die; (3) internal changes within the occupational structure itself, resulting from the movement of residents from one occupational group to another.

Decennial censuses show the net changes that have taken place in the size and composition of both the population and the labor force during intercensal periods. They are not sufficient, however, to indicate the gross changes that characterized the intervening years, and they cannot separate the effects

of migration from the changes resulting from occupational mobility on the part of the non-migrant population of the community. What is needed for this type of intensive analysis is a source that provides the basis for identifying the separate streams of in- and out-migration and the occupational attachment of the members of these streams, as well as the occupations of the non-migrant population at the beginning and at the end of the decade.

The only comprehensive sources available for this project in Norristown were vital statistics records, school records, and city directories. An unbroken series of city directories covers the last one hundred years; school records date to the turn of the century; and complete files of birth and death certificates exist for the last sixty years. These sources were used, in part because they have the requisite historical depth, but largely because tests showed that these three quite distinct types of data, when combined in the process of analysis, give an accurate record of the Norristown population now and forty years ago, and make it possible to study the effect of migration and occupational mobility on the labor force composition of the community. With such sources available, the method for obtaining the data necessary for this analysis was a comparatively simple one.

The city directories of Norristown contain the names, addresses, and occupations of all adult male residents of the community. These directories have been compiled and issued every second year since 1860. For this analysis, two samples were drawn from the directories of each decade from 1910 to 1950, one from the first directory of the decade, and the other from the last directory of the decade. Each sample consisted of a ten per cent random selection of all male residents listed. Tests¹

* Revised version of paper read at the annual meeting of the American Statistical Association, September, 1954, and based on work done as part of a study of Technological Change and Social Adjustment at the University of Pennsylvania under the sponsorship of its Behavioral Research Council.

¹ See Sidney Goldstein, "City Directories as Sources of Migration Data," *The American Journal of Sociology*, 60 (September, 1954), pp. 169-176.

indicated that they were representative both of the total size of the adult male population of Norristown and of its occupational composition.

The sample drawn from the first directory of the decade served as the basis for measuring migration out of the community during the ensuing decade. By tracing the individuals in this sample through the five succeeding directories of that decade, it became possible to note changes of residence within Norristown and changes in occupation. A large number of individuals were found in all directories, but others disappeared in the course of being traced. These disappearances were attributable either to death or to out-migration. All of the disappearances were, therefore, checked, name by name, in the death certificates. After those who were no longer listed because of death had been identified, the remaining disappearances were classified as out-migrants.

Correspondingly, the sample drawn from the last directory of the decade provided the basis for determining in-migration during the previous decade. By tracing the individuals in this sample through all the five preceding directories of the decade, it became possible to note all changes in residence and occupation. As in the case of the forward traced samples, a large number of these individuals were listed in all directories. Others did not appear as they were traced back in time. These were the potential in-migrants—potential because it was also possible that some were not found in the earlier directories because they were not old enough to be covered by directory entries. All of these “disappearances” were, therefore, checked, name by name, in the school records and birth certificates. After those who entered the directory because of aging were identified, the remaining “disappearances” were classified as in-migrants.

Combination of the results obtained from both the forward and backward tracings through each decade provided data for analyzing the patterns of both migration and occupational mobility during the decade. The data indicated how many and what segments of the population resident in the community at the beginning of the decade moved out by the end of the decade, and how many and what segments of the popu-

lation resident in the community at the end of the decade had moved in during the previous ten years. In addition, for all those persons in both samples who were continuous residents of Norristown throughout the decade, these data made possible the analysis of patterns of occupational mobility by comparison of the occupational attachment of each individual at the beginning of the decade with his occupational attachment at the end of the decade. By joint analysis of the migrants and the residents, it was possible to evaluate changes in the labor force structure from one census to another in terms of both the occupational mobility of the resident population of Norristown as an adjustment to the changing economic needs of the community, and the in- and out-movement of persons of particular occupations, largely in response to the push and pull of employment opportunities in Norristown and elsewhere. In making possible these analyses, this method provided a basis for obtaining data on the changing roles and interrelations of migration and occupational mobility in affecting the size and composition of the labor force structure of the Norristown male population from 1910 to 1950.

SOME SUBSTANTIVE FINDINGS

Migration. The major emphasis of this paper is on the patterns of occupational mobility and its relation to migration in each of the last four decades. The results of the migration analysis will therefore be summarized briefly.²

For the forty year period from 1910 to 1950, migration accounted for 79 per cent of the population growth of the adult male population of Norristown, the remaining growth being attributable to a surplus of young males entering the adult cohort over those lost to it by death. This heavy contribution of migration to population growth was not, however, uniform throughout the forty year period. Its importance declined steadily from the 1910–1920 decade when the opposing streams of in- and out-migra-

² For a fuller discussion of migration patterns in Norristown see, Sidney Goldstein, "Patterns of Internal Migration, Norristown, Pennsylvania, 1910–1950," Philadelphia: Behavioral Research Council, 1953, dittoed.

tion³ resulted in a net gain to the community of 213 persons per 1,000 population, to the decade of 1940-1950 when the net gain was only 35 per 1,000 population. In the 1920-1930 decade the net migration gain was 119 per 1,000 and in 1930-1940 it was only 4.

Despite the fact that migration has come to play a decreasing role in the population and labor force growth of Norristown, the actual volume of the separate streams of movement into and out of the community remained at very high levels throughout the forty year period. Whereas the in-migration rate of the two earlier decades was significantly higher than the out-migration rate, in the two later decades the gap between the rates was greatly reduced. In the 1910-1920 decade, for example, out of every 1,000 adult males living in Norristown, 270 had moved out by 1920, and in that interval 483 out of every 1,000 had moved into the community. In contrast, 369 out of every 1,000 adult males living in Norristown in the 1940-1950 decade had moved out by 1950, and 404 per 1,000 had moved in during the same ten year period. Thus, despite the fact that the overall pattern of migration had changed, the total rates of movement were high for all four periods.

While these high rates of in- and out-migration have not greatly affected the total size of the Norristown population in more recent decades, the fact that the opposing streams of movement were selective of persons in the different occupational groups meant that migration served to alter the occupational composition of the male labor force. The beginning of the forty year period was characterized by gains through migration by all occupational groups, as examination of the data of Table 1 will indicate. For three groups—professionals, proprietors, and unskilled laborers—these net gains amounted to over 300 per 1,000 persons in each group. Only for the clerical and sales workers was the net rate of gain below 100 per 1,000 workers in this cate-

³ The decennial migration rates were based on the adult male population resident in Norristown at the midpoint of the decade. The midpoint population was attained through averaging the two decennial populations. By using this base, the in-, out-, and net-migration rates of each decade were all based on the same population group.

TABLE 1. DECENTNIAL RATES OF IN-, OUT-, AND NET-MIGRATION, NORRISTOWN, PENNSYLVANIA, 1910-1950, BY OCCUPATIONAL GROUP *

	1910-1920	1920-1930	1930-1940	1940-1950
In-Migration Rates				
Professionals	455	489	518	338
Managers	471	542	273	333
Clerical and sales	308	410	309	286
Skilled laborers	410	456	285	362
Semi-skilled	508	475	481	480
Unskilled	678	623	418	461
All groups	483	501	381	404
Out-Migration Rates				
Professionals	152	267	250	415
Managers	143	365	455	280
Clerical and sales	269	343	335	464
Skilled laborers	282	335	352	286
Semi-skilled	317	436	333	372
Unskilled	288	385	490	373
All groups	270	382	377	369
Net-Migration Rates				
Professionals	303	222	268	— 77
Managers	328	177	—182	53
Clerical and sales	39	67	—26	—178
Skilled laborers	128	121	—67	76
Semi-skilled	191	39	148	108
Unskilled	390	238	—72	88
All groups	213	119	4	35

* Rates represent the number of adult male migrants per 1,000 males in each occupational group at the midpoint of each decade.

gory. These net rates of gains and losses of individual occupational groups showed no consistent patterns of change decade by decade. By 1930-1940, however, the significant reduction in the total net effect of migration was reflected in the different occupational groups. In this decade all groups except professionals and semi-skilled workers experienced net losses through migration, and the rates of these two groups, while still positive, were lower than in the first decade of this forty year period. This same pattern of either net losses or low net rates of gain as compared to the 1910-1920 decade continued into 1940-1950. Thus, in both 1930-1940 and 1940-1950, migration played a less significant role in altering the size of each

occupational group than it did in 1910-1920.

Migration, as indicated earlier, is only one among several factors responsible for changes in the occupational composition of the Norristown population, the others being the entrance of young persons into the labor force, the exodus of old ones through retirement and death, and occupational mobility. Within the limits of this paper, it is not possible to discuss the role of maturation, death, and retirement in changing the labor force structure. The discussion which follows is limited to an analysis of the decennial occupational mobility patterns of those Norristown males who resided in the community throughout the decade and who were members of its labor force at both the beginning and the end of each ten year period of residence.

Occupational Mobility. The analysis of occupational mobility, like that of migration, was based on directory data. In both the forward and backward tracings of each decade, relatively large numbers of individuals were identified as having been continuous residents of Norristown throughout each decade. Data for these persons included information on the job held at the time of each biennial directory enumeration of the population. Each job attachment was classified into the appropriate occupational category as defined by the Bureau of the Census' "Alphabetical Index of Occupations and Industries."⁴ Occupational mobility was then defined as movement from one major occupational group to another, whether for the same or for a different employer. It does not include change in jobs involving movement within the same occupational category. By a comparison of the occupational identification of each resident at the beginning of the decade with that at the end of the decade, it was possible to determine for each ten year period whether he had been occupationally mobile, and if so, the type of move involved. Among the main findings were the following:

1. The stability rate of the Norristown male labor force, as measured by the proportion of the resident population remaining

* The categories used were professionals, managers, clerical and sales workers, skilled laborers, semi-skilled laborers, and unskilled laborers.

TABLE 2. OCCUPATIONAL MOBILITY, RESIDENT MALE LABOR FORCE OF NORRISTOWN, 1910-1950,
BY DECADES

Decade	Upward Mobility*	Same Occupation	Downward Mobility*	Total Per Cent	Total Number
1910-1920	15.8	75.9	8.3	100.0	781
1920-1930	17.5	71.4	11.1	100.0	760
1930-1940	21.1	65.9	13.0	100.0	907
1940-1950	22.8	65.1	12.1	100.0	972

* See Footnote 6 for a definition of upward and downward mobility.

in the same occupational category during each decennial period, has decreased steadily from 1910-1920 to 1940-1950.⁵ Of the sample population of the 1910-1920 decade, 75.9 per cent were in the same occupational group at the beginning and at the end of the decade. The stability rates in the three following decades were 71.4, 65.9, and 65.1, respectively. Thus over the forty year period under consideration, there was an increase of approximately 10 per cent in the proportion of males in the labor force who had changed occupational affiliation by the end of each ten year period. It is significant for our later discussion to note here that there was very little change in stability rates from the 1930-1940 to the 1940-1950 decades.

2. The decrease in stability from 1910-1920 to 1940-1950 characterized all occupational groups except the semi-skilled, whose stability rate in 1940-1950 was approximately the same as in 1910-1920. Among professionals, managers, and skilled workers, the stability rates of 1940-1950 were approximately 10 per cent lower than in 1910-1920. Among clerical and sales workers and unskilled laborers, the 1940-1950 rates were approximately 20 per cent lower than those of 1910-1920.

3. In each decade, professionals, managers, and skilled laborers, in that order, consistently represented the most stable occupations. This is explainable, no doubt, by the positions these three categories occupy on the occupational hierarchy, the professionals and the managers being at the

⁵ The directory listings did not include any data on the age of the persons analyzed in this study. It was not possible, therefore, to control the age factor in the analyses of either migration or occupational mobility.

TABLE 3. OCCUPATIONAL MOBILITY, MALE RESIDENTS OF NORRISTOWN, 1910-1920

Occupation in 1910	Occupation in 1920						Total Per Cent	Total Number
	Professional	Manager	Clerical and Sales	Skilled	Semi-skilled	Unskilled		
Professional	94.7	—	5.3	—	—	—	100.0	38
Manager	2.7	89.2	4.1	2.7	1.3	—	100.0	74
Clerical and sales	2.5	15.0	67.5	3.3	5.9	5.8	100.0	120
Skilled worker	0.5	1.7	1.7	86.2	4.4	5.5	100.0	182
Semi-skilled worker	0.5	4.5	4.9	11.9	67.8	10.4	100.0	202
Unskilled worker	—	5.5	4.2	6.1	13.9	70.3	100.0	165

top of the white collar hierarchy and the skilled laborers at the top of the manual labor groups. As the data in Tables 3-6 show, the stability rate of these three groups never went below 74.8. The stability rates of the three remaining groups were never above 75. In relation to each other, however, they showed no consistent pattern.

4. For the total labor force, despite the increased amount of occupational mobility, the direction of movement⁶ among those who were mobile remained approximately the same. Thus in 1940-1950, as in 1910-1920, approximately twice as many of the mobile persons moved up the occupational ladder as moved down. (See Table 2.)

5. The patterns of upward and downward movement differed significantly among the different occupational groups, partly because of their relative positions on the occupational hierarchy. Professionals who were

mobile could move only down to positions lower on the scale. Among managers, in all four decades, the proportion who moved down was significantly greater than the proportion who moved up. Reflecting their middle position in the hierarchy, the mobile clerical and sales workers moved in large numbers both up and down the occupational scale; except for the 1930-1940 decade, more of these mobile persons moved up into higher white collar occupational categories than down into manual labor groups. Mobile members of the three laboring groups were consistent in their mobility patterns in all four decades. Reflecting their top position among manual laborers, a majority of the skilled laborers who were mobile moved down into less skilled manual labor occupations rather than up into white collar positions; more semi-skilled workers moved up into skilled labor and white collar positions than down into unskilled jobs; unskilled laborers who were mobile necessarily moved up because of their position at the bottom of the hierarchy.

6. Examination of the specific occupational group into which mobile persons of each occupational category moved indicates that if the general increase in mobility in the later periods is taken into account, the

⁶ For purposes of analyzing direction of movement, occupations were arranged in the order used by the United States Bureau of the Census, i.e., professionals, managers, clerical and sales, skilled, semi-skilled, and unskilled laborers. Movement from a job in one category to a job in another category higher in the list is defined here as upward mobility. Contrariwise, movement to a job belonging to a category lower on the list is defined as downward mobility.

TABLE 4. OCCUPATIONAL MOBILITY, MALE RESIDENTS OF NORRISTOWN, 1920-1930

Occupation in 1920	Occupation in 1930						Total Per Cent	Total Number
	Professional	Manager	Clerical and Sales	Skilled	Semi-skilled	Unskilled		
Professional	91.4	—	5.7	—	2.9	—	100.0	35
Manager	2.9	77.1	11.5	4.3	2.8	1.4	100.0	70
Clerical and sales	3.6	12.5	75.0	0.9	3.6	4.4	100.0	112
Skilled worker	—	6.3	4.0	76.9	6.9	5.9	100.0	173
Semi-skilled worker	1.1	2.2	8.1	10.3	59.4	18.9	100.0	185
Unskilled worker	—	4.9	2.7	9.7	12.4	70.3	100.0	185

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TABLE 5. OCCUPATIONAL MOBILITY, MALE RESIDENTS OF NORRISTOWN, 1930-1940

Occupation in 1930	Occupation in 1940						Total Per Cent	Total Number
	Professional	Manager	Clerical and Sales	Skilled	Semi-skilled	Unskilled		
Professional	88.0	—	6.0	4.0	2.0	—	100.0	50
Manager	—	75.0	10.4	2.1	10.4	2.1	100.0	96
Clerical and sales	3.0	12.1	60.6	5.3	11.4	7.6	100.0	132
Skilled worker	2.4	2.9	5.3	74.8	9.2	5.4	100.0	206
Semi-skilled worker	—	2.7	9.1	7.5	66.8	13.9	100.0	187
Unskilled worker	0.4	3.0	4.7	9.7	30.1	52.1	100.0	236

patterns of 1940-1950 closely resembled those of 1910-1920. In general the greatest amount of movement was into those occupational groups most closely related to those to which the individuals originally belonged. Reflecting this, most movement took place between occupations within the two major classes of occupations, i.e., white collar and manual labor categories, rather than between jobs belonging to different major categories. It is important to recognize, nonetheless, that in all four decades there was a minority of persons who made major changes in occupational affiliation and thereby significantly altered their position in the socio-economic scale.

In review, almost all segments of the Norristown labor force have been characterized by an increased amount of mobility in 1940-1950 as compared to 1910-1920. However, the direction and range of movement in these two extreme decades has not changed significantly. For most groups, the mobility in the 1930 and 1940 decades was similar and, therefore, represented a leveling off of the earlier trends toward increased instability in occupational affiliation. These being the major patterns of occupational mobility from 1910 to 1950, let us now see, what relationship, if any, they bear to the patterns of migration.

Interrelationships Between Migration and Occupational Mobility. Although it is assumed that economic conditions are largely responsible for both migration and occupational mobility, it is not possible within the limits of this paper to evaluate the changing economic conditions and their relation to these two processes. Discussion will necessarily be limited to what relationship these two processes bear to each other.

It will be recalled that net rates of migration were much higher in the earlier decades of the twentieth century than they were in the last two decades. In the 1910-1920 decade the net rate of migratory gain was 213 persons per 1,000 population, and in 1920-1930 it was 119. In the 1930-1940 decade, however, it touched a low of 4 and in 1940-1950 it remained at this low level. This forms a pattern of a decreasing net rate of migration with a tendency to level off during the last twenty years. Whereas in 1910-1920 all but the clerical and sales group experienced large net rates of gain through migration, by 1940-1950 two groups were experiencing net losses and the rates of gain of the remaining groups were significantly lower than they were in 1910-1920. Between these same two periods, the rates of occupational mobility of all occupational groups except the semi-skilled laborers in-

TABLE 6. OCCUPATIONAL MOBILITY, MALE RESIDENTS OF NORRISTOWN, 1940-1950

Occupation in 1940	Occupation in 1950						Total Per Cent	Total Number
	Professional	Manager	Clerical and Sales	Skilled	Semi-skilled	Unskilled		
Professional	83.8	6.5	6.5	1.6	1.6	—	100.0	62
Manager	2.6	79.2	13.0	—	3.9	1.3	100.0	77
Clerical and sales	8.0	18.5	49.4	6.2	15.4	2.5	100.0	162
Skilled worker	1.6	5.3	3.1	76.8	12.1	1.1	100.0	190
Semi-skilled worker	0.7	4.5	4.5	9.7	69.4	11.2	100.0	268
Unskilled worker	1.4	5.2	5.2	11.8	25.7	50.7	100.0	213

creased among the continuous residents of Norristown.

These data on migration and occupational mobility suggest the possibility that to the extent Norristown is able to meet either its increased or its changing labor force needs by attracting persons from outside the borough, to that extent will there be less need and/or opportunity for occupational mobility by those who are gainfully employed in the local economic structure. On the other hand, once this outside supply ceases to be attracted, then the labor force needs of the local area are met by a constant readjustment within the resident population.

When the volume of mobility was high in the first decade, it can be assumed that most of the needs of the expanding Norristown economy were met by drawing migrants into the borough. As this period of rapid expansion slowed and the economy became more stable, the attractiveness of Norristown as a place of economic opportunity diminished. As a result, the net rate of migration decreased to a point where by the 1930-1940 and the 1940-1950 decades the number of in-migrants just about balanced the number

of out-migrants. During this period, however, while the economy may not have been expanding, its internal structure was changing as new types of jobs were created and old ones were eliminated. The response to these changing needs is reflected in the selective character of the in- and out-movement and in the increased amount of occupational mobility on the part of those who remained in the community throughout the decade.

Of course, such an explanation does not rule out the possibility that over the last forty years there has been a decreasing amount of job attachment on the part of the labor force members to their original occupational positions. The data, indeed, suggest that this is so. Whether this is related in a causal manner to the reduced volume of net migration cannot be conclusively determined. It is clear, however, that as a concomitant of decreased net migration, there has been an increased amount of occupational mobility. This suggests, therefore, that migration and occupational mobility have served to complement each other and in so doing have jointly served to meet the changing needs of the local economy and thereby to effect changes in the labor force structure.

SOME CONCOMITANTS OF METROPOLITAN SIZE *

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THE importance of the changes in collective living associated with the emergence of large scale urbanization during the past century and a half has been clearly acknowledged by the impressive amount of research that has been carried on in the general field of urban organization. Despite the difficulties involved in studying the tangled fabric of relationships in the urban type of social structure, certain regularities have consistently appeared in the research of urban sociologists. One of the most important of these regularities has been found in research dealing with the relationships between various kinds of social phenomena

and the population size of urban units. One recent author has pointed out, in fact, that "the characteristics of the urban population tend to vary in several significant ways with changes [and differences] in the size of the urban place."¹

The units with which we shall be concerned here are metropolitan centers and the metropolitan areas in which these centers are located. It should be kept in mind that the choice of these units results in a selection of the largest of urban places, for metropolitan centers represent only one end of the

* Paper read at the annual meeting of the American Sociological Society, September, 1954. The senior author expresses grateful appreciation to the Social Science Research Council for a Research Training Fellowship which made this study possible.

¹ Donald J. Bogue, "Urbanism in the United States, 1950," *American Journal of Sociology*, 60 (1955), p. 478; italics added. Bogue's article, incidentally, contains a lucid statement of the relationship between the urban concept and the new census unit used in this paper, i.e. the Standard Metropolitan Area.

array of cities of all sizes. Any variation in social phenomena that may be associated with size cannot be fully explored here, since the full range of urban size is not represented.

Before presenting the findings of this study, it would perhaps be appropriate to make a few comments of a theoretical nature regarding the significance of population size for the kinds of social phenomena being studied. Stated in most general terms, population size constitutes a limiting factor for the development of social organization. Social organization denotes a pattern of relationships among differentiated parts. The complexity of organization observed in the modern western world rests upon an extreme differentiation of units or parts which can enter into complementary relationships with each other. Organization presupposes differentiation, and to the extent that population size restricts the number of unit parts which can be differentiated, population size places limits upon the complexity which social organization can assume.²

The suggestion that population size is an item of theoretical significance in the study of urban phenomena becomes even more compelling when the nature of urban organization itself is examined. Cities are simply not self-sufficient entities. Urban centers can exist only through the production of goods and services for exchange with other areas. Thus, cities serve as mediating agencies between populations involved in exchange relationships.

The ability of a city to perform this role of mediation is dependent, among other things, upon its available personnel—that is, the size of its population. The more important this mediating function, the greater are the personnel requirements of the city.

² These propositions can be found in the works of early theorists; see, for example, August Comte, *The Positive Philosophy*, (translated and edited by Harriet Martineau), New York: William Gowans, 1868, pp. 519-520. Population size occupied a crucial place in the well-known explanations of functional differentiation offered by Adam Smith, Herbert Spencer, and Emile Durkheim. For a recent theoretical exposition see Amos H. Hawley, *Human Ecology: A Theory of Community Structure*, New York: Ronald Press, 1950, pp. 122-123. An empirical investigation of certain of these relationships may be found in Leslie Kish, "Differentiation in Metropolitan Areas," *American Sociological Review*, 19 (1954), pp. 388-398.

Accordingly, the population size of a city may be regarded as a simple index of the extensiveness of its mediating function as well as an indication of the complexity of its social organization.

It is hardly necessary to point out that the mediating function of the city cannot be fulfilled without facilities for movement. Transport routes and carriers must bring spatially separate populations within easy access of one another if exchange is to take place. Just as population size places limits upon the complexity of social organization, the effectiveness of transportation agencies can be said to set limits upon the size of the population which can be embraced in a given organizational unit.

Although the transportation factor is not treated empirically in this study, its theoretical importance is vital. Briefly stated, transportation can be regarded as a major component of the locational costs borne by units of the local community. The greater the accessibility between any given unit and the other units with which it is interdependent, the less are the costs of transportation. Conversely, a unit's location at a position of less than maximum accessibility to these units is attended by higher transportation costs.

With these theoretical considerations in mind, we may now turn to an examination of some of the differences between metropolitan city size classes. The data to be presented here were gathered as part of a larger study of metropolitan development in the United States. Most of these data consist of selected census characteristics in 1950 for all of the 168 Standard Metropolitan Areas in the country. It will be seen that the characteristics to be examined have been classified in a manner that permits not only comparisons *between* size classes but also comparisons *within* size classes, where central cities proper are compared with their peripheral ring areas.³

³ Unless otherwise noted, all of the basic data used in this report were taken from the U. S. Bureau of the Census, *County and City Data Book*, 1952, Washington: U. S. Government Printing Office, 1953; Table 2 (for Standard Metropolitan Areas) and Table 4 (for central cities of these areas). A more detailed methodological statement may be found in Leo F. Schnore, *Patterns of Decentralization*, unpublished doctoral dissertation, University of Michigan, 1954.

Three broad size classes are recognized here: (1) nineteen areas with *large* central cities of 500,000 or more inhabitants; (2) seventy-five areas with *middle-size* central cities of 100,000 to 500,000 inhabitants; and (3) seventy-four areas with *small* central cities of 50,000 to 100,000 inhabitants. This size classification was chosen for the sake of clarity of exposition. In general, the same results were obtained with the more familiar geometric size classification used by the Bureau of the Census. Again, the results were almost precisely identical when the basis of classification was the population size of the entire Standard Metropolitan Area rather than that of the central city alone. This follows, of course, from the rather high correlation between these two measurements of population size.

The data in Table 1 show a clear association between size and geographic location. The classification used here is that

TABLE 1. CITY SIZE AND GEOGRAPHIC LOCATION, 1950, IN PERCENTAGES

Geographic Location	Large Cities	Middle-Size Cities	Small Cities
Coast	63	25	12
River	37	28	22
Other	0	47	66
Total	100	100	100
N for all Tables:	19	75	74

developed by Hawley; it comprises the following three broad categories: (a) sea or lake coast, (b) navigable river, and (c) all other locations.⁴ The last, of course, is a residual category that includes a variety of locational types. All of the large metropolitan centers are found at deep water sites. The frequency of deep water location declines with city size so that fully two-thirds of the smallest metropolitan centers are located at other than water sites.

These data seem to point up the importance of transportation in the development of large scale metropolitan organization. They also tend to support one of the suggestions made earlier to the effect that city size

⁴ Amos H. Hawley, *Population Redistribution Within Metropolitan Areas of the United States: 1900-1950*, Glencoe: The Free Press, 1955; this classification is used with the kind permission of the author. If a city is located at a junction of a coast and a river it is classified as a coastal city.

is an index of the extensiveness of the mediating functions of urban centers. Water transportation is primarily a long-haul, large-bulk type of movement which facilitates inter-regional exchange. The fact that the largest metropolitan centers are all associated with this type of transportation may be particularly significant in the light of the suggestion that population size has functional ramifications for social organization.

Physical density, of course, may serve as an index of Durkheim's "dynamic density" of social organization if the facilities for transportation and communication are assumed to be approximately equal in the cities under examination. It is not surprising to find a rather clear association between city size and population density, or number of persons per square mile. Table 2 shows that the larger the size, the greater the proportion of cities with high density ratios. The opposite tendency appears for low density ratios.

TABLE 2.* CITY SIZE AND DENSITY OF CENTRAL CITY POPULATION, 1950, IN PERCENTAGES

Density	Large Cities	Middle-Size Cities	Small Cities
High	74	32	24
Medium	11	37	35
Low	15	31	41
Total	100	100	100

* Since the general form of this table appears several times in this report, it might be well to remark briefly upon its construction. The units, i.e. metropolitan centers, were ranked from high to low with respect to their density measures. This ranked distribution was then arbitrarily divided into three equal-size groups of 56 units each, and the groups were classified as "high," "medium," and "low." This procedure was followed wherever the characteristic being examined assumed a continuous value.

We have already commented upon the complexity of the functional organization of large urban places. In order to test some of the alternative possibilities of functional classification, three variables were selected. These were simply the proportions of the employed labor force engaged in manufacturing, trade, and agriculture. These data are presented in Tables 3, 4, and 5. Except for agricultural employment, there seems to be only a limited association between these functional indices and city size. The largest

TABLE 3. CITY SIZE AND PROPORTION OF METROPOLITAN LABOR FORCE IN MANUFACTURING, 1950, IN PERCENTAGES

Proportion in Manufacturing	Large Cities	Middle-Size Cities	Small Cities
High	32	33	34
Medium	57	31	30
Low	11	36	36
Total	100	100	100

metropolitan centers tend to fall in the "medium" range of manufacturing and trade employment, while the two smaller size classes tend to have a rather evenly balanced representation among the three functional categories. There is a noticeable absence of the largest metropolitan centers in the "low" range of manufacturing employment. The fact that large centers tend to have at least a "medium" level of manufacturing employment is perhaps attributable in some degree to the fact that these centers are deep water ports. Since they are break-of-bulk points, they present unusual opportunities for the processing of goods and materials.

The small but noticeable tendency for the largest metropolitan centers to be well represented in the "medium" range of trade employment and somewhat underrepresented in the "high" range of this function is certainly not the result of a lack of trade activities. Indeed, if sheer volume of activity is considered, this group includes all of the leading wholesale and retail trade centers of the nation. The importance of trade in these centers, however, is overshadowed by the substantial complements of personnel engaged in other activities, particularly in manufacturing and personal services.

In contrast with the rather small differences in manufacturing and trade employment associated with metropolitan size, the data in Table 5 on agricultural employment show marked differences by size class. There is a clear inverse relation between size and

TABLE 5. CITY SIZE AND PROPORTION OF METROPOLITAN LABOR FORCE IN AGRICULTURE, 1950, IN PERCENTAGES

Proportion in Agriculture	Large Cities	Middle-Size Cities	Small Cities
High	0	19	56
Medium	5	40	35
Low	95	41	9
Total	100	100	100

the proportion of the metropolitan area labor force engaged in agriculture. The relatively large representation of the smallest metropolitan centers in the category of "high" agricultural employment partially reflects a tendency for many of these smaller cities to serve as trading centers for a rural farm hinterland.⁵

It should be remembered, however, that as used here, "high," "medium," and "low" are only relative terms. Actually, very few metropolitan areas have significant proportions of their employed labor force in agriculture. Only eight of the 168 Standard Metropolitan Areas exceed the proportion of such employment found in the nation as a whole (12.2 per cent), and only four of these exceed the national average by as much as five percentage points.

Turning again for the moment to the manufacturing function, the data in Table 6 represent a very crude indication of the extent to which the relative decentralization of manufacturing is associated with size differences. Here a comparison is made be-

TABLE 6. CITY SIZE AND MANUFACTURING DE-CENTRALIZATION, 1950, IN PERCENTAGES

Manufacturing Employment	Large Cities	Middle-Size Cities	Small Cities
Ring higher	84	59	43
City higher	16	41	57
Total	100	100	100

tween the proportions of the employed labor force in manufacturing activities in central cities and in metropolitan rings within each of the three broad size classes. It need hardly be pointed out that this comparison does not indicate the extent to which manu-

TABLE 4. CITY SIZE AND PROPORTION OF CENTRAL CITY LABOR FORCE IN TRADE, 1950, IN PERCENTAGES

Proportion in Trade	Large Cities	Middle-Size Cities	Small Cities
High	21	33	37
Medium	47	35	28
Low	32	32	35
Total	100	100	100

⁵ However, Kingsley Davis has pointed out that the county basis of the definition of the Standard Metropolitan Area contributes to this apparent relationship in a degree that is difficult to measure with any accuracy.

factoring facilities are decentralized, for the base of the computation is the labor force residing in central cities and in rings. Certainly a comparison of the number of manufacturing units or a comparison of this number weighted by the number of employees would yield a somewhat different picture of industrial decentralization.

With this qualification in mind we may examine the differences between size classes. The pattern is quite clear. Industrial decentralization, as defined here, is most evident in the largest size class where almost 85 per cent of the areas have higher proportions of manufacturing employees residing in their rings. This proportion declines noticeably with decreases in city size. Within the limitations of this measurement of decentralization, there is a clear association between size of central city and the extent of industrial decentralization.

It is apparent that any attempt to delineate the functional bases of cities of metropolitan size is a difficult problem of classification. Each of the single-factor classifications just discussed is subject to serious criticism. Since cities of metropolitan size ordinarily contain a wide variety of manufacturing and service activities, we are immediately faced with the problem of selecting criteria with which to assess the relative importance of each of these activities within each area. It was decided to use, with appropriate minor adaptations, a well-known classification scheme based on the relative proportions of the labor force found in different industrial groups. This classification was originally developed by Harris, modified by Kneedler, and applied with minor modifications by Victor Jones to both Standard Metropolitan Areas and central cities as defined in the 1950 census.⁶

The Harris-Kneedler-Jones system has the advantages of simplicity and clarity, for it pretends to do no more than to point

out certain broad similarities among cities. From the detailed categories available in this classification system combinations were made to yield the following four broad functional types: (a) manufacturing centers; (b) diversified centers; (c) retail centers; and (d) all others. The last category includes wholesale, transportation, governmental, educational, resort and retirement centers.

Although some of the differences are small, Table 7 shows that all of the functional types are more heavily represented as city size increases, except the retail type. The proportion of this type is inversely related to city size. Indeed, the proportion of small cities showing a predominance of retail activity is twice that found among the largest centers.

TABLE 7. CITY SIZE AND ECONOMIC FUNCTION, 1950, IN PERCENTAGES

Economic Function	Large Cities	Middle-Size Cities	Small Cities
Manufacturing	37	36	34
Diversified	32	25	18
Retail	21	31	41
Other	10	8	7
Total	100	100	100

In comparison with the single-factor classifications used above, this typology appears to present a more realistic picture of the differences in city function associated with size. Although this functional typology is admittedly crude, the basis of classification is internal with respect to each unit, and a discernible pattern of differences associated with size does emerge. The tendencies found here seem to be in accord with the known differences in geographic location among these cities of varying size. Moreover, they are not inconsistent with the results of examining the simple proportions of the labor force engaged in manufacturing, trade, and agriculture. Finally, this multiple-factor classification system distinguishes more clearly than any of the single-factor approaches the functional differences between the two smaller size classes of metropolitan centers.

In view of the interest of social scientists in socio-economic status differentials some attention might be directed toward an examination of broad status differences be-

⁶ Chauncy D. Harris, "A Functional Classification of Cities in the United States," *Geographic Review*, 33 (1943), pp. 86-99; Grace M. Kneedler, "Functional Types of Cities," *Public Management*, 27 (1945), pp. 197-203; Victor Jones, "Economic Classification of Cities and Metropolitan Areas," *The Municipal Year Book*, 1953, Chicago: The International City Managers' Association, 1953, pp. 49-57. The last-named classification is used here with the kind permission of the publisher.

TABLE 8. CITY SIZE AND MEDIAN FAMILY INCOME FOR METROPOLITAN AREAS, 1950, IN PERCENTAGES

Median Income	Large Cities	Middle-Size Cities	Small Cities
High	68	37	20
Medium	27	32	37
Low	5	31	43
Total	100	100	100

tween metropolitan centers. An area of research that has been only partially explored is the problem of the extent of status differentials existing between cities of different size. Even less is known about these relations among metropolitan centers. Two problems will be taken up briefly here. First, an effort will be made to outline broad status differences among metropolitan centers of different size. Second, comparisons will be made between the populations of central and peripheral zones of metropolitan areas within each of the three size classes.

With respect to the first problem it can be seen immediately from the data presented in Tables 8, 9, 10, and 11 that a clear and positive relationship exists between metropolitan city size and each of the four measures of social status, namely—median family income, median school years completed, proportion of employed males in professional occupations, and median monthly rental. This pattern appears without exception.

TABLE 9. CITY SIZE AND MEDIAN SCHOOL YEARS COMPLETED FOR METROPOLITAN AREAS, 1950, IN PERCENTAGES

Median School Years Completed	Large Cities	Middle-Size Cities	Small Cities
High	42	36	28
Medium	32	36	31
Low	26	28	41
Total	100	100	100

Some, if not a large part, of the association observed between size and these status measures may reflect regional differences, for the South, which has generally low income, education, and rent levels, is more heavily represented by smaller metropolitan centers.

The possible bias of regional differences, however, does not have the same influence on the patterns which appear when status comparisons are made between central cities and their respective metropolitan rings.

TABLE 10. CITY SIZE AND PROPORTION OF EMPLOYED MALES IN PROFESSIONAL OCCUPATIONS FOR METROPOLITAN AREAS, 1950, IN PERCENTAGES

Proportion in Professions	Large Cities	Middle-Size Cities	Small Cities
High	63	44	15
Medium	37	31	35
Low	0	25	50
Total	100	100	100

These data are presented in Tables 12, 13, 14, and 15.

Here again the association between size and status appears to be manifest and indisputable. For each socio-economic index the following pattern obtains: the larger the central city, the more likely it is that the socio-economic status of ring residents will be higher than that of city residents. This pattern also appears without exception.

TABLE 11. CITY SIZE AND MEDIAN GROSS RENTAL FOR METROPOLITAN AREAS, 1950, IN PERCENTAGES

Median Rental	Large Cities	Middle-Size Cities	Small Cities
High	68	32	26
Medium	16	37	33
Low	16	31	41
Total	100	100	100

At the beginning of this paper some remarks were made about the theoretical importance of the transportation factor for this study. It was suggested that transportation costs may be regarded as comprising an important component of the total locational costs which must be borne by units of the local community. This theoretical proposition might profitably be applied to the empirical findings reported here on status comparisons between central city and metropolitan ring areas. Other things being equal, location at the periphery of a community places a heavier burden of transportation costs upon the occupant. These higher costs must be paid for necessary goods and services as well as for the transportation of the occupant to other places, as in the daily journey between home and work. These costs are probably not offset by the lower average cost of land at the periphery.⁷

Certain physical differences might be expected to be associated with differences in

⁷ Leo F. Schnore, "The Separation of Home and Work: A Problem for Human Ecology," *Social Forces*, 32 (1954), pp. 336-343.

TABLE 12. CITY SIZE AND MEDIAN FAMILY INCOME IN CENTERS AND RINGS, 1950, IN PERCENTAGES

Median Income	Large Cities	Middle-Size Cities	Small Cities
Ring higher	95	37	19
City higher	5	63	81
Total	100	100	100

city size. The larger the city, the more extensive is the land area occupied by the aggregate population of units in daily contact with one another. The more extensive this occupied land area, the greater is the average distance from the point of maximum accessibility at the center of the community, and the higher is the average transportation cost. On the basis of these considerations, one may reasonably conclude that in large urban places the units which locate at the periphery must be prepared to bear location costs considerably higher than those encountered at the periphery of smaller urban

TABLE 14. CITY SIZE AND PROPORTION OF EMPLOYED MALES IN PROFESSIONAL OCCUPATIONS IN CENTERS AND RINGS, 1950, IN PERCENTAGES

Proportion in Professions	Large Cities	Middle-Size Cities	Small Cities
Ring higher	68	35	15
City higher	32	65	85
Total	100	100	100

places, where peripheral sites are not so remote from the community center. The suggestion is made here that the larger the city, the greater is the selectivity of its peripheral population. That is, the peripheral populations of large cities may tend to be selected on the basis of their ability to assume unusual location costs. Viewing the data in the light of these considerations, it is not surprising to find that broad status comparisons between central city and ring areas show this strong and consistent relationship with metropolitan size.

TABLE 13. CITY SIZE AND MEDIAN SCHOOL YEARS COMPLETED IN CENTERS AND RINGS, 1950, IN PERCENTAGES

Median School Years Completed	Large Cities	Middle-Size Cities	Small Cities
Ring higher	74	40	24
City higher	26	60	76
Total	100	100	100

TABLE 15. CITY SIZE AND MEDIAN GROSS RENTAL IN CENTERS AND RINGS, 1950, IN PERCENTAGES

Median Rental	Large Cities	Middle-Size Cities	Small Cities
Ring higher	74	45	30
City higher	26	55	70
Total	100	100	100

POPULATION, AREA, AND DENSITY OF COMPARABLE METROPOLITAN DISTRICTS AND STANDARD METROPOLITAN AREAS *

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THE PROBLEM

THE substitution of the *standard metropolitan area* for the *metropolitan district* in the 1950 U. S. Census represents a definite change in the Census approach to the definition of metropolitan communities.

The *standard metropolitan area* and the *metropolitan district* are alike in being delineated by adding to the territory of a central city (or cities) with 50,000 or more

population, the territories of adjacent and contiguous territorial units which meet stipulated criteria.¹ They differ, fundamentally, in two respects: (1) in the territorial "build-

¹ The Census delineation of metropolitan communities includes only the more urbanized populations and territories, in contrast to other procedures which divide the nation into a number of metropolitan regions. Cf. R. D. McKenzie, *The Metropolitan Community*, New York: McGraw-Hill, 1933; and D. J. Bogue, *The Structure of the Metropolitan Community, A Study of Dominance and Subdominance*, Ann Arbor, 1949. It is the selectiveness of the Census approach which makes the problem of what territory to include or exclude in metropolitan communities a critical one.

* Revised version of paper read at the annual meeting of the American Sociological Society, September, 1951.

ing blocks" utilized, and (2) in the criteria for inclusion of additional territorial units. For most of the United States, the standard metropolitan area (of 1950) is delineated by adding to the *county* containing the central city, *county* units characterized by positive indices of urbanization and of economic and social integration with the central city county. The metropolitan district (1940 and earlier) was delineated by adding to the territory of the central *city*, the territories of adjacent and contiguous *minor civil divisions* with population densities of 150 per square mile or more.² An interesting variation on the national picture is presented by New England, where standard metropolitan areas were delimited by adding to central cities, minor civil divisions selected by criteria combining social-economic integration and population density.

The purpose of this paper is to analyze empirical differences in population, area, and density of American metropolitan communities defined as "metropolitan districts," and as "standard metropolitan areas." Comparisons are based throughout on 1940 population figures³ and are limited to the 140 metropolitan districts which are directly comparable to 148 standard metropolitan areas.⁴ Twenty standard metropolitan areas had never previously been defined as metropolitan districts, and they are omitted from consideration.

² For technical details of the two definitions, see *Sixteenth Census of the United States, 1940, Population*, Volume 1, p. 11; and *Census of Population, 1950*, Volume 1, pp. xxxiii-xxx.

³ Better comparability would have been obtained had it been feasible to redefine standard metropolitan areas in terms of the 1940 situation; however, it seems certain that this methodological refinement would not alter the conclusions drawn from the present comparisons of 1940 metropolitan district populations with 1940 populations of the standard metropolitan areas which were delineated 10 years later.

⁴ The 8 additional standard metropolitan areas were created by subdividing 8 metropolitan districts. In the comparisons which follow, seven pairs of standard metropolitan areas are recombined for comparison with the original seven metropolitan districts from which they were carved; in the remaining case, the original metropolitan district (which extended into two geographic divisions) is split into two parts to correspond with the two standard metropolitan areas. (See footnote 6.)

POPULATION DIFFERENCES⁵

Table 1 summarizes 1940 population differences between 140 metropolitan districts and 148 corresponding standard metropolitan areas by regions and divisions.⁶ Examination of the U. S. totals on the last line of the table shows the total population of the 140 metropolitan districts in 1940 was 62,965,773 (column 2), whereas the 1940 population of the 148 corresponding standard metropolitan areas was 67,666,906 (column 1).⁷ The difference is 4,701,133 (column 7), which is the net population added to 1940 metropolitan communities by the change from metropolitan district to standard metropolitan area definition. An initial effect of redefinition, then, is to increase the population included in corresponding metropolitan communities by 7.5 per cent. But redefinition also excludes from standard metropolitan areas some populations which were included in metropolitan districts. Thus, 61,896,118 persons are included in 1940 metropolitan communities by both definitions (column 3); 5,770,788 are included in standard metropolitan areas but *not* in metropolitan districts (column 4); and 1,069,655 are included in metropolitan districts but *not* in standard metropolitan areas (column 5). There is, then, what may be called a gross difference of 6,840,443 persons (column 8) who are included in 1940 metropolitan communities according to one definition but not according to the other. This is 9.95 per cent of the total number of persons included in 1940 metropolitan communities of the United States by one

⁵ All figures in this section were derived from the 1950 Census release on Standard Metropolitan Areas (Series PC-3, No. 3), and from the 16th Census of the United States, *Population*, Volume 1.

⁶ There were a few interdivisional overlaps. Each metropolitan region was tabulated with the Census division containing its largest central city, with two exceptions: the Connecticut portion of the New York-Northeastern New Jersey metropolitan district is included with New England; and the Wilmington metropolitan region is tabulated with the Middle Atlantic Division to avoid complications arising from overlap of the Wilmington metropolitan district and the Philadelphia standard metropolitan area.

⁷ Adding the 1,609,575 population in new metropolitan areas to this figure gives the total 1940 standard metropolitan area population of 69,276,481 reported by the Census. See *1950 Census of Population*, Series PC-3, No. 3, Table 1.

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TABLE 1. POPULATION AND POPULATION DIFFERENCES, METROPOLITAN DISTRICTS AND CORRESPONDING STANDARD METROPOLITAN AREAS: 1940

Geographic Region and Division*	Standard Metropolitan Areas	Metropolitan Districts	Population				Population Difference		
			Standard Metropolitan Areas and also Metropolitan Districts		Standard Metropolitan Areas but not Metropolitan Districts	In Metropolitan Districts but not in Standard Metropolitan Areas		Gross Metropolitan	Net†
			1	2		3	4		
New England*	5,479,741	5,882,826	5,457,754	21,987		425,072	5,904,813	-403,035†	447,059
Middle Atlantic*	22,716,355	21,150,319	20,843,428	1,872,927	306,891	23,023,246	1,566,036	2,179,818	
North East	28,196,096	27,033,145	26,301,182	1,894,914	731,963	28,028,059	1,162,951	2,626,877	
E. N. Central	15,094,624	14,018,759	13,904,975	1,189,649	113,784	15,208,408	1,075,865	1,303,433	
W. N. Central	4,825,229	4,395,724	4,359,398	465,831	36,326	4,861,555	429,505	502,157	
North Central	19,919,853	18,414,483	18,264,373	1,655,480	150,110	20,069,963	1,505,370	1,805,590	
South Atlantic*	6,137,822	5,246,199	5,128,764	1,009,058	117,435	6,255,257	891,623	1,126,493	
E. S. Central	2,348,177	2,058,155	2,047,945	300,232	10,210	2,358,387	290,022	310,442	
W. S. Central	3,511,907	3,229,935	3,207,613	304,294	22,222	3,534,229	281,972	326,616	
South	11,997,906	10,534,289	10,384,322	1,613,584	149,967	12,147,873	1,463,617	1,763,551	
Mountain	874,454	772,727	767,233	107,221	5,494	879,948	101,727	112,715	
Pacific	6,678,597	6,211,129	6,179,008	499,589	32,121	6,710,718	467,468	531,710	
West	7,553,051	6,983,856	6,946,241	606,810	37,615	7,590,666	569,195	644,425	
United States	67,666,906	62,965,773	61,896,118	5,770,788	1,069,655	68,736,561	4,701,133	6,840,443	

* Metropolitan regions tabulated with geographic division containing largest central city, except Connecticut portion of New York-Northeastern New Jersey (assigned to New England) and Wilmington, assigned to the Middle Atlantic Division because of overlap with Philadelphia standard metropolitan area.

† Net difference is standard metropolitan area total minus metropolitan district total. Only in New England did the metropolitan district total exceed the standard metropolitan area total.

definition, the other, or by both (gross metropolitan population, column 6). Thus, the overall measure of the effect of definitional change on the 1940 population of metropolitan regions may be taken as approximately ten per cent.

It is evident from Table 1 that the substitution of standard metropolitan area for metropolitan district definition has had rather different effects on the inclusion and exclusion of population in metropolitan communities in different parts of the United States. The differences are accounted for, in part, by variations in population density, in the geographic size of counties, and in the distribution of metropolitan communities themselves; and in part by the special situation of New England in standard metropolitan area definition.

As is shown in Table 1, in New England alone of the nine geographic divisions the metropolitan district population exceeds the standard metropolitan area population. Ten of the twelve metropolitan districts in New England for which comparable standard metropolitan areas were defined were larger than corresponding standard metropolitan areas and the other two (Portland, Maine, and Manchester, New Hampshire) were identical in size. Only five of the remaining 138 metropolitan communities under consideration were larger in population by metropolitan district definition than by standard metropolitan area definition, four in the North Central States, and one in the South Atlantic Division.⁸ New England, with only 12 of the nation's 140 metropolitan districts, has 10 of the 15 metropolitan districts which exceeded corresponding standard metropolitan areas in population.

The contrast is striking. When it is remembered that New England is the *only* geographic region in the United States in which minor civil divisions were used as territorial units in the construction of standard metropolitan areas, it seems a highly significant indication of the importance of the shift to counties as units for delineating standard metropolitan areas in the rest of the country. Obviously, the criteria (urbanization and integration with central city) established for adding a given

block of territory to a metropolitan community under the standard metropolitan area definition are more discriminating than the simple criterion of density applied in metropolitan district definition. Just as obviously, the delineation of metropolitan communities through the selective addition of small territorial units (minor civil divisions) is more discriminating than delineation by a process which requires the inclusion or exclusion of much larger territorial units (counties). In New England, maximal discrimination was achieved in the delineation of standard metropolitan areas by the use of small territorial divisions as units and adding them to metropolitan territory only if they met the more rigorous criteria for inclusion. The result was to *reduce* the population of Census-defined metropolitan communities. In the remaining forty-two states, the necessity of following county boundaries in delineating standard metropolitan areas overbalanced the more discriminating criteria for inclusion of territorial units. The consequence was to *increase* substantially the population of Census-defined metropolitan communities.

AREA AND DENSITY DIFFERENCES⁹

Table 2 summarizes net differences between areas and population densities of corresponding metropolitan districts and standard metropolitan areas by geographic regions. It will be observed that the total area in the 148 standard metropolitan areas, 172,131 square miles, is nearly four times as great as the total area of metropolitan districts, with approximately 15 per cent of the additional territory in the Northeast, and the remainder distributed fairly evenly among the other three geographic regions. The West, with the smallest metropolitan population (about 11 per cent of the total) has the largest territorial addition—over 40,000 square miles, which is nearly as much as the total U. S. area of metropolitan districts, 44,626 square miles. New England, alone among the nine Census Divisions, has more territory in metropolitan districts than in standard metropolitan areas. As the Bureau

⁸ Akron, Cincinnati, Evansville, Milwaukee, and Norfolk-Portsmouth (Newport News).

⁹ Data in this section derived from 16th Census of the United States, *Population*, Vol. 1, and "Is Planning Practical for Your Town?" Publication No. 60, Revised, New England Regional Planning Commission, December, 1940.

TABLE 2. AREAS AND POPULATION DENSITIES, METROPOLITAN DISTRICTS AND CORRESPONDING STANDARD METROPOLITAN AREAS: 1940

Geographic Region and Division *	Area in Square Miles			Population Per Square Mile			Average Differential Density §
	Standard Metropolitan Areas †	Metropolitan Districts ‡	Net Differences	Standard Metropolitan Areas	Metropolitan Districts		
New England*	3,737	4,598.7	-861.7	1,466	1,279	468	
Middle Atlantic *	29,299	9,359.1	19,939.9	775	2,260	79	
Northeast	33,036	13,957.8	19,078.2	853	1,937	61	
East North Central	23,745	7,014.0	16,731.0	636	1,999	64	
West North Central	22,076	3,869.1	18,206.9	219	1,136	24	
North Central	45,821	10,883.1	34,937.9	435	1,692	43	
South Atlantic*	21,944	5,677.5	16,266.5	280	924	55	
East South Central	8,686	2,826.8	5,859.2	270	728	49	
West South Central	15,978	5,102.4	10,875.6	220	633	26	
South	46,608	13,606.7	33,001.3	257	774	44	
Mountain	15,314	996.0	14,318.0	57	776	7	
Pacific	31,352	5,182.4	26,169.6	213	1,199	18	
West	46,666	6,178.4	40,487.6	162	1,130	14	
United States	172,131	44,626.0	127,505.0	393	1,411	37	

* Metropolitan regions tabulated with geographic division containing largest central city, except Connecticut portion of New York-Northeastern New Jersey (assigned to New England) and Wilmington, assigned to the Middle Atlantic division because of overlap with Philadelphia standard metropolitan area.

† Computed from county areas as reported by the 16th Census (Population, vol. 1, State Tables No. 3, each state). New England areas were derived by adding (or subtracting) town areas as appropriate to metropolitan district areas. Town areas obtained from "Is Planning Practical for Your Town?" *op. cit.*

‡ Derived from 16th Census, Population, vol. 1, Table 17. Tents of square miles included to balance total metropolitan district area.

§ Net difference in population (Table 1, above) divided by net difference in area.

of the Budget points out: "The use of county units sometimes results in the inclusion in a standard metropolitan area of a considerable amount of territory which would not ordinarily be considered metropolitan.¹⁰

Density. With the single exception of New England, all geographic regions and divisions show a much greater density for metropolitan districts than for standard metropolitan areas. In New England, where the average standard metropolitan area density is the highest for any division, 1466 persons per square mile, the metropolitan district

average density is 1,279—less by about 13 per cent.

The average differential density¹¹ measures the relation between the people and the land added to or subtracted from metropolitan communities by the shift from metropolitan district to standard metropolitan area definition. For New England, where it represents territory and people included in metropolitan districts, but excluded from standard metropolitan areas, it is 468 persons per square mile. This figure is more than three times the density standard of the metropolitan district definition for peripheral civil divisions (150 per square mile). For the other divisions, where it represents territory and people not in metropolitan districts but included in standard metropolitan areas, the average differential density ranges from

¹⁰ Executive Office of the President, Bureau of the Budget, mimeographed release "Standard Metropolitan Area Definitions," July 28, 1950. The same statement cautions that, "In the presentation of statistics relating to land area . . . this characteristic of the standard definitions would constitute a serious weakness, and their use for such purposes would ordinarily be inappropriate."

¹¹ Obtained by dividing net differences in population by net differences in area.

7 persons per square mile in the Mountain Division to 79 per square mile in the Middle Atlantic States. In no other region or division is it even half as large as the metropolitan district standard for peripheral areas. For the nation as a whole, the average differential density, 37 persons per square mile, is only one-quarter as great as the metropolitan district standard.

Thus, for forty-two states the territorial extent of metropolitan communities is increased and population density is decreased by the substitution of the standard metropolitan area for the metropolitan district definition. In New England, territory is decreased and density is increased by the change in Census definition.

CONCLUSIONS

The preceding analyses lead inescapably to three conclusions:

1. Where counties were used as territorial units, the change in Census definition from the metropolitan district concept to the standard metropolitan area concept *increased* population and area designated as "metropolitan" and *decreased* population density for Census-defined metropolitan communities.

2. Where minor civil divisions were used as territorial units (in New England), the change in Census definition *decreased* population and area designated as "metropolitan" and *increased* population density for Census-defined metropolitan communities.

3. Users of statistics compiled for Census-defined metropolitan communities who are habituated to the metropolitan district concept, should evaluate carefully the implications of the new definition before drawing inferences from data published for standard metropolitan areas.

REWARDS AND TASK-ORIENTATIONS *

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PREVIOUS articles¹ have tried to show that whatever gains a society may make by distributing rewards unequally according to occupational position are offset to a considerable extent by the losses in productivity which are generated by that same system of rewards.

It is the intent of this paper to consider whether a high level of productivity may be sustained at the same time that losses generated by unequal rewards may be reduced

by introducing greater equality of rewards. The special focus of this inquiry is on the conditions which impel men to be conscientious at their tasks; i.e., willing to do the most of which they are capable rather than the least with which they can get by.

Taking "conscientiousness" as the major dependent variable here may be justified, since, holding resources and technology constant, the productivity of any society, whatever its goals, varies with:

- (1) how well existing talents are identified,
- (2) how well they are trained,
- (3) how appropriately they are placed, and
- (4) how well the actors are motivated to be conscientious.

Aside from questions of technical competence, maximum use of existing talents clearly requires equality of opportunity. Any inequality of opportunity—unless based on perfect prior knowledge of where the talent lies—is bound to deprive a society of the full range of its potential talents. Of course, no society has all the resources necessary to train all available talent to the

* Revised version of paper read at the annual meeting of the American Sociological Society, September, 1954. Acknowledgment is here made to W. J. Goode and Arnold Feldman for their helpful suggestions. Acknowledgment is also hereby made to the Social Science Research Center of the University of Puerto Rico for their assistance in making available the time during which these ideas were formulated.

¹ "Some Principles of Stratification: A Critical Analysis," *American Sociological Review*, 18 (August, 1953), pp. 387-394. See also "Reply by Kingsley Davis and Wilbert Moore," *American Sociological Review*, *ibid.*, pp. 394-398. See also my "Reply," *American Sociological Review*, 18 (December, 1953), pp. 672-73. See also my article, "Obstacles to Creativity," *ETC*, 11 (Summer, 1954), pp. 261-71.

highest possible expression and must always, therefore, choose from among its various needs and talents. But such types of losses may be ignored for the moment and a condition of abundant resources be assumed, in order that the variations in conscientiousness which arise from unequal opportunities may be seen more clearly.

Conscientiousness is difficult to deal with as a dependent variable since it is so difficult to measure directly. This could be critical when one is trying to evaluate the relative efficiency of alternative inducements to conscientiousness, if in addition there were no indirect measures or indices. But it may be possible to suggest some such indices and to use them in such a way that some reasonable approximation at a comparison among alternatives is achieved.

We must obviously exclude from consideration here those situations in which men are compelled by threat and force to work at their top capacities. The range of alternatives will be limited to include only those conditions under which there is a margin of choice, such that, depending on how they themselves decide, men tend to do the most of which they are capable or the least with which they can get by.

In all such situations of choice, some balance is struck between what a man feels he requires from the situation and what he feels the situation requires from him. The two limiting cases are (a) the "totally social orientation," where an individual works at top capacity regardless of personal rewards, and (b) the "totally personal orientation," where an individual does only as much as he feels is required to get the amount of reward he himself desires.

If these two limiting cases may be viewed as the polar extremes on a continuum of possibilities, it may then be asked what are the conditions which are likely to move men more in one rather than another direction. Specifically, what are the variations which result from altering the system of distribution of rewards in the direction of generally greater equality?

Two sets of comparisons would shed light on this question. We may examine the range of conscientiousness within the same institution in different societies, or we may compare different institutions within a

single society. Probably it does not matter for the problem here, since it is conscientiousness in its generic aspect which is at stake, in the sense that whatever is asserted about conscientiousness must apply with equal force to any institutional context in any society.

A comparison of the structure of the job role with that of the parent role in modern American society should be illuminating. For, when these structures are side by side, two sets of differences emerge which relate directly to the major variables of equality and conscientiousness.

There is, first, a demonstrable difference in the reward structures: the job situation exemplifies the principle of unequal positional rewards, whereas, the parental situation approaches far closer to equal rewards for equal conscientiousness.

There is, secondly, a difference in task orientation: the average parent tends to approximate the totally social orientation to his role, while the average employee tends more toward the totally personal orientation to his job. This latter distinction is both provisional and relative. There is undoubtedly considerable overlap, such that numbers of employees are more social in their orientations to their jobs than numbers of parents to their parenthood. Yet it seems unmistakable that there are significant differences between the average tendencies in each of these two institutional contexts.

The relevant differences in the reward systems are as follows:

(1) In the job structure, men are rewarded with different amounts of scarce and desired goods, theoretically in accordance with the relative functional value of their positional talents. While the formal reward is measured only in terms of income, there are adhesions of prestige and power to control one's own environment. Thus, the major rewards of the society tend to be allocated according to occupational rank.

By contrast, in the parental role structure, none of the major scarce and desired rewards of the society are available for distribution, except in those cases where economic values have invaded the familial sphere. The normatively expected rewards which are present are of two kinds: (a) community acceptance; (b) a range of personal

gratifications, including love, power and domestic bliss.

(2) The achievement by any one parent of the fullest measure of available reward does not necessarily limit the amount of reward which any other parent can achieve. In a number of important ways, one gets out of his parental role about what he puts into it. By contrast, in the job structure, any one person's reward is always, to some degree, a function of the amount of reward received by all others.

(3) In the job structure, equal conscientiousness on the part of all workers would still result in highly differentiated rewards. In the parental structure, however, equal conscientiousness would in theory produce something approaching complete equality of reward. Two facts bear this out: (a) It would be next to impossible to construct any systematic hierarchy of invidiously differentiated positions.² (b) Only a few would feel it worthwhile to trade positions.

Given these two contrasting sets of reward features, different sets of expectations about conscientiousness arise, depending upon the theory or assumptions regarding work incentives with which one operates.

If one assumes—as does the traditional sociological view on stratification—that men of different talents cannot be adequately motivated except by differential rewards of scarce and desired goods and services, then there should be far more conscientiousness shown by the average employee at his job than by the average parent in his familial tasks.

It is contended here, however, that actual behavior reverses these theoretical expectations. The following observations may be offered in support of this contention.

There is strong normative support for an

² The premise implicit in the last statement asserts that, in theory, economic differences among families are irrelevant to the possibility of equal discharge of familial obligations and equal achievement of familial rewards. In fact, of course, this is untrue. But if we were to take into account those differences which result from differentiated economic position, we would be unable to consider the structure of the parental role as an analytic unit and to compare it with the structure of the job role. It is, therefore, important to consider it apart from those consequences wrought by differential economic position. Once this has been done, it will then become possible to compare the operations of such a structure under varying economic conditions.

attitude of bargaining pay against work on the job, encouraging and sustaining an attitude of calculation, and often leading to deliberate withholding of work. By contrast, there is no support for such an attitude on the part of a parent, and indeed there are specific negative sanctions against exhibiting such an attitude.

There are a number of good reasons to expect a calculating attitude toward the job:

(1) In any system of hierarchically arranged, formally differentiated, and invidiously evaluated positions, there is likely to be a persisting strain toward redefinition of existing rewards and evaluations, since the holder of any given position, except the very top, is likely to take a brighter view of his relative worth than the system itself takes. This strain often takes the overt form of trying to force the system to redefine the rewards and evaluation attached to one's position.

(2) In any such system, it is extremely difficult for men at all positions to identify equally with the enterprise, since they are publicly identified as being unequal in their importance to the enterprise. One expects identification to be differentiated in proportion to position in the hierarchy. And further, one expects that the less the identification with the enterprise, the more the tendency to calculate how much work the rewards and evaluations deserve. By withholding work—as is done by informal group rate setting—men in the lower echelons adjust the ratio of work to reward at the level they deem proper. Thus, men in the lower echelons join trade unions to give power to their demands for more rewards from the system. Bargaining and calculating on the job thus make sense as reactions to the strains generated by the above cited differences in job evaluation and identification.

By contrast, such bargaining or calculating of work against reward is not so possible in the parent role, since there is no system of hierarchically structured and invidiously evaluated rewards. There are no formal limits to the amount of work other than legal restraints against desertion or neglect. But there is one very sharp informal limit on how derelict one can be in his parental role: namely, the consequences of parental dereliction tend to be immediately

and directly felt by the parent. These consequences may take the form of delinquency behavior by the child, unpleasantness in the home, family quarrels, or a variety of problems, short of actual family fracturing, which the parent cannot avoid.

The directness and immediacy of the problem incurred by a derelict parent contrasts sharply with the fact that a worker at the job may never, by his lights, feel the consequences of his own shirking. It would seem reasonable to assume that men tend to be more conscientious in an enterprise where they reap the rewards of their conscientiousness and the punishments for their derelictions than a contrary situation where it is difficult to sense any important connection to the enterprise.

By themselves, these differences in structural orientations and the consequent differences in identification give enough reason to expect a considerable amount of variance in conscientiousness in the two situations. But there are other differences which tie in intimately with those just cited, and these may be more briefly mentioned here.

(1) Workers entering blue collar jobs tend to learn to refer themselves to their work-group peers for the appropriate model of on-the-job behavior. Restraints are exercised to keep any individual from aspiring beyond his existing work group. Moreover, since he is rewarded according to his position on the job, there is little point in striving beyond the already established positional norm, unless mobility is desired and this striving can be seen as instrumental to mobility. For those who settle into permanent niches, there is likely to be good reason not to strive to excel. And almost any large-scale industrial organization tends to be informally dominated at the blue collar level by the older and more settled workers.

By contrast the theoretical model of a parent is that of the "best possible parent," who "tries to do the most he can for his children." This appears to be the generic model held up for emulation, no matter in what stratum or group.

(2) On the average blue collar job routines are specified and there is little room for spontaneity, creativity and decision-making. In the parent role, however, in addition to the recognized large measure of hard work,

drudgery and routine, there is much more room for individual interpretation, decision-making and creativity.

(3) A third difference lies in the relative absence of control over the course of events at the job as contrasted with the significant control which can be exercised over the directions of family life. A man is more likely to work hard at a process which he himself can direct than at one where he simply follows instructions.

(4) This last cited difference in control is intimately linked with a difference in the ability to identify with the end product in question. The usual blue collar job is only one small portion of a much larger job-organization, and a contribution to the end product is rarely identifiable in any personally gratifying sense. By contrast, every cultural token specifies that what happens in family life, and how children turn out, is the handiwork of parents and their handiwork alone.

(5) Finally, there appears to be a significant difference in the extent to which total personalities and the range of talents are used on the job and in parental roles. In the former, there are sharply defined limits as to which personality attributes, and which talents are relevant. Work roles are highly restricted in that sense. By contrast, the range of parental tasks usually requires all of one's talents. Moreover, there is considerably more room for the play of emotions. In short, far more of the total range of humanness is relevant to parental than to job roles.

Here, then, are a series of differences between the structure of the job role and that of the parental role, all of which create the expectation that parents will tend far more toward the totally social orientation, while workers will tend more toward the totally personal orientation.

To what extent, it may now be asked, can this difference in conscientiousness be accounted for by differences in the reward structure?

In describing the differences between the job and parent roles in the previous pages, there have been cited a number of intervening variables which seem to be required to account for variations in conscientiousness. The concept of identification is the

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most important. And it has been argued that the differences between the job and parent roles make it eminently more possible for much larger numbers of persons to identify with their parental tasks than with their jobs.

The basic assumption here is that men tend to work harder, i.e., give more of themselves to an enterprise, when they consider themselves as intrinsic and valuable parts of that enterprise. Moreover, men come to value their parts in an enterprise in proportion to the extent that they receive symbolization of their value by those whose opinions matter to them and by criteria which they consider relevant.

In these terms, three factors become critical in determining the degree of identification which any individual will exhibit: (a) the amount of control he exercises over the relevant environment; (b) the extent to which he feels, directly and immediately, the consequences of his efforts; (c) the extent to which the fact of his conscientiousness is rewarded.

Certain structural requirements of efficient bureaucratic organization probably set sharp limits on the amount of feasible decentralization and spreading of control, and the extent to which the average employee can be brought to feel the consequences of his own efforts more directly and immediately.

Theoretically, however, there is nothing in the structural requirements of efficient organization which would make it less efficient to reward according to conscientiousness rather than according to differential talent.

In the parent role structure, there is considerable conscientiousness precisely because there is a structural pay-off for being conscientious. The more effort a man puts into his parental role, the more he gets out of it in gratification. In the job structure, the relevance of effort to reward is much less direct and often inconsequential. If it is conscientiousness which one seeks to maximize, then clearly it is this principle rather than biologically inherited talent which ought to be the central criterion in the reward system.

By way of contrary argument, the advocates of unequal positional rewards argue that (a) it is differential talents which are the central concern, and (b) that the more

valuable and scarce talents will not be brought into play unless their possessors are rewarded with unequal amounts of scarce and desired rewards.

Clearly the discovery and training of valuable talents is a critical consideration. But maximum equality of opportunity is the crucial necessity in these phases. When it comes to *motivating* these trained, talented persons to offer their services conscientiously, one can argue that they will withhold if they are not offered differential rewards only on the assumption that this is "the nature of man."

But the analysis of parent role playing has shown how the "nature of man" also includes being willing to be as conscientious as possible without regard to differential and invidiously evaluated rewards. This would seem to suggest that if men tend to insist on differential rewards as the price for offering their differential talents, it is because they have been socialized, instructed and encouraged to do so, rather than because of any "inevitabilities" in their human makeup.

Underlying the assumption of a "natural tendency to seek differentiated rewards" are a series of assumptions which are virtually identical with those which underlie classical and neoclassical formulations regarding the supply and demand of goods in the market. This supply-demand model has long since been shown to be an inadequate model of social behavior. It seems strange that it should be allowed to re-enter a system of theoretical postulates in this scarcely altered form.

It is suggested, in summary, therefore, that

1. There is a marked loss of conscientiousness in any system of unequal positional rewards.
2. This loss would be considerably reduced if identification were increased at all levels of talent.
3. Equal rewards for equal conscientiousness would probably produce a marked increase in identification.

A system of equal rewards for equal conscientiousness is probably, therefore, a reasonable alternative to a system of unequal positional rewards and probably would enhance the productivity of any system of role playing, no matter what the institutional context.

FUNCTIONAL ALTERNATIVES TO INEQUALITY *

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FUNCTIONAL analysis is supposed to explain a given cultural item in terms of certain of its consequences, particularly those affecting societal survival or individual satisfaction. Such analysis should take into account the item's functional alternatives, namely, other items of culture which, if employed, would have the same consequences.¹ This paper attempts to show that inequality as analyzed by Davis and Moore² has functional alternatives and that this fact requires extension or modification of their analysis.

Functional explanations of cultural universals, whether given in terms of survival or adjustment,³ run into difficulty over alternatives. Survival explanations typically assume that any society must, in order to survive, attain certain states which are its "functional prerequisites." It is then assumed or shown that a particular cultural item tends to bring about one or more of these prerequisites. From these propositions, it is sometimes deduced that any surviving society will necessarily possess the particular item. If it can be shown, however, that the item has a functional alternative capable of fulfilling the same prerequisite, this explanation becomes insufficient, for the question

then arises: Why was not a society able to survive by using the alternative to attain the functional prerequisite?

On the other hand, adjustive explanations suppose that failure to attain some state of affairs gives rise to dissatisfaction among members of the society and that a given item which reduces that dissatisfaction will tend to persist. A functional alternative, in this case some other item which would also reduce the dissatisfaction, would tend to remove the reinforcement by which the original item was explained. Accordingly, a complete adjustive explanation should show why such alternatives have not been employed. In either case, failure to explain why the alternatives have not been substituted for the original item should throw doubt upon the adequacy of the analysis and spur the search for other consequences by which the item may be more fully explained.

In their noteworthy analysis of inequality, Davis and Moore appear to have considered inadequately the possibility of functional alternatives. They attempt to account for the presumed universality of "stratification," by which they mean inequality among the "rights and perquisites of different positions in a society."⁴ Their explanation is based

* Expanded version of paper read at the annual meeting of the American Sociological Society, September, 1954. I am indebted to Chris Argyris, George Peter Murdock, and Earl Rubington for their comments on an earlier draft of this paper.

¹ For a discussion of functional alternatives, see R. K. Merton, *Social Theory and Social Structure*, Glencoe, Ill.: The Free Press, 1949, esp. pp. 34-37, 52-53.

² Kingsley Davis and Wilbert E. Moore, "Some Principles of Stratification," *American Sociological Review*, 10 (1945), pp. 242-249. Recent discussion has not substantially modified those points to which the present paper is directed. See K. Davis, *Human Society*, New York: Macmillan, 1949, pp. 364-389, and Davis' "Reply" to M. M. Tumin, *American Sociological Review*, 18 (1953), pp. 394-397.

³ For a discussion of the interrelation of these principles in the analysis of economic behavior, see A. A. Alchian, "Uncertainty, Evolution and Economic Theory," *The Journal of Political Economy*, 58 (1950), pp. 211-221.

⁴ Davis and Moore, *op. cit.* A number of definitional problems inhere in the Davis-Moore paper, some of which have been discussed by M. M. Tumin, "Some Principles of Stratification: A Critical Analysis," *American Sociological Review*, 18 (1953) pp. 387-394. The concept of equality remains to be elucidated. Davis and Moore apparently mean the term to apply to equality of rewards rather than equality of opportunity, but their paper does not specify how and from whose point of view reward-equality is to be judged. Are rewards equal if every member of the society reports the same degree of satisfaction as every other member, as might be the case in a society where each member preferred his own position to that of every other? Or is equality measured by the distribution of some "objective" rewards such as wealth and power? How should rewarding properties be established: by verbal reports of preference, choice behavior, or differential reinforcing capacity? How would different rewards be equated and different value systems taken into account in

on the premise that differential rewards tend to motivate the most qualified persons to train for and fill "the most important positions." As they put it, "Social inequality is thus an unconsciously evolved device by which societies insure that the most important positions are conscientiously filled by the most qualified persons."⁵ Presumably the consequence of this is to maximize the effectiveness of the society, but it is not clear whether this consequence is seen as a functional prerequisite for survival, a source of adjustive satisfaction, or both. In any case, their explanation becomes insufficient if the same consequence can be brought about by other cultural items, i.e., if inequality as seen by Davis and Moore appears to have functional alternatives.

In the two communities considered here, some cultural practices tend to accomplish the consequences which Davis and Moore attribute to inequality. No attempt is made to show that these items replace inequality completely. Since inequality exists in various forms in both communities, the purpose is not to challenge the Davis-Moore generalization that inequality is universal. Nor will an attempt be made to demonstrate that inequality may sometimes detract from rather than contribute to maximum efficiency in the training and distribution of personnel, even though this may well be the case in the collective community. This paper simply points out that both communities have developed ways other than inequality which help get important positions conscientiously filled by able personnel.

The data come from a year's comparative study of two middle-sized Israeli settlements, one a collective *kvutza* which will here be called Orah, the other a smallholders' *moshav* called Tamim.⁶ The two settlements

are similar in such features as area,⁷ topography, type of agriculture (mixed), population size (about 475), ethnic origin (predominantly Eastern European),⁸ and political affiliation (social democratic),⁹ but differ markedly in economic organization. The *kvutza* operates on the principle "from each according to ability, to each according to need," distributing material benefits (but not power and prestige) in roughly equal shares without regard to work status.¹⁰ The *moshav* is a cooperative whose land is divided into equal farmsteads, each of which is worked without hired help by a family acceptable

writer's unpublished doctoral dissertation, *Institutional Consistency in a Collective Society*, Yale University, 1952.

⁷ In September, 1950, Orah held 8335 dunams to 8021 for Tamim. Of this total, more were held on temporary loan pending the formation of new settlements by Orah (3650 dun.) than by Tamim (2000 dun.). (One dunam equals approximately one-fourth of one acre.)

⁸ Among the respondents to a questionnaire administered to more than 90 per cent of all adult members in both settlements, 65.3 per cent from Orah and 62.3 per cent from Tamim said they had originated in Russia, Poland, or the Baltic countries. Israel was the next largest source, providing 17.4 per cent of *kvutza* and 15.6 per cent of *moshav* respondents. Both had drawn about the same proportion from the Balkans (8.7 per cent *kvutza* to 8.8 per cent *moshav*), while the *moshav* had a somewhat larger proportion from Germany, Austria, and Czechoslovakia (7.8 per cent *kvutza* to 11.1 per cent *moshav*).

⁹ A majority of the Israeli collectives, known as *kibbutzim*, were composed at the time of the study either wholly or in substantial part of members affiliated with the leftist *Mapam* party. Orah was selected from among the predominantly *Mapai* (social democratic) collectives, known as *kvutzot*, to permit comparison with one of the *moshav* settlements, none of which supports *Mapam*. In the details of internal social organization with which we are here concerned, the *kvutzot* do not appear to differ substantially from *kibbutzim* of comparable size and political homogeneity.

¹⁰ See Eva Rosenfeld, "Social Stratification in a 'Classless' Society," *American Sociological Review*, 16 (1951) pp. 766-774. For further description and discussion of the Israeli collectives, see J. Baratz, *Degania*, Tel Aviv: Lion the Printer, 1943; Y. Ben Yissakhar (Morris), "The Kibbutz at the Cross-roads," in *Zionist Newsletter*, 2 (1949-50), Nos. 6-13; D. Maletz, *Young Hearts*, New York: Schocken, 1950; R. D. Schwartz, "Social Factors in the Development of Legal Control," *Yale Law Journal*, 63 (1954) pp. 471-491; M. E. Spiro, "Is the Family Universal?" *American Anthropologist*, 56 (1954) pp. 839-846; and United Nations Series on Community Organization and Development, *Israel*, 1954.

reckoning the degree of equality within a given society? In short, are there so many different ways of judging equality that no society could possibly meet all of them, with the result that inequality would be universal by virtue of the ambiguity with which it is defined?

⁵ Davis and Moore, *op. cit.*

⁶ Substitute names have been used to conceal the identity of the two settlements. Field work on which this paper is based was carried out in 1949-50 with the aid of a Sterling Predoctoral Fellowship from Yale University and a Research Training Fellowship from the Social Science Research Council. A detailed ethnographic report is given in the

to the members' General Assembly.¹¹ The economic system of each settlement requires a distinctive work force.

In the kvutza a highly co-ordinated economy provides relatively few independent decision-making positions and a large proportion of routine semi-skilled agricultural and service jobs. Three-fifths of the workers consider themselves to be working under the direction of others, and very few are wholly independent of superiors. Following the classic administrative pattern, many of the directed workers are themselves responsible for supervising others. More than half of all members report themselves responsible for other workers, either other members or trainees. Although almost half of these supervisors are responsible for only one or two workers, nearly one-fourth are responsible for more than ten workers, usually including some of the lower level administrators. Even among the supervisory jobs, particularly at the lower organizational levels, much of the work is designated unskilled or semi-skilled "black" work, neither demanding nor permitting a high degree of independent decision-making. Many expressions of job dissatisfaction by kvutza members appear to stem from the fact that they do not feel that their skills are being adequately utilized, e.g., that their jobs are dull, that their manager is oppressive, or that they could be doing far more constructive work.

By contrast, the moshav economy makes very different demands on its members. Two-thirds of the family heads are farmers, and each farmer is expected to manage all the branches of his farm effectively enough to stay above a certain danger point.¹² Under difficult economic conditions and handi-

capped by lack of a farming tradition, the moshav farmer must utilize all his decision-making abilities to achieve security. Similar responsibility devolves on the skilled workers who comprise the remaining third of the family heads. Many of them must procure and schedule work, manage their financial affairs, and conduct small-scale farming. Moshav wives manage the household, care for the children, and assume responsibility for certain of the lighter farm chores. Much less authority is exercised in the moshav than in the kvutza economy: three-fifths of Tamim's members report that they receive work directions from no one, and four-fifths are not responsible for the work of any other person.

Thus the two settlements differ markedly in the extent to which their workers are permitted and required to use their capabilities for decision-making. If we assume that other factors such as the composition of the work force are equal, we would expect the kvutza to have a shortage of routine workers and the moshav a dearth of responsible decision-makers. Each kind of position, whether or not the "most important" in the society, is important enough so that failure adequately to fill it results in dissatisfaction for the members and a threat to the survival of the settlement. Scarcity of workers willing and/or able to fill such positions should lead, according to Davis and Moore, to differential reward for their conscientious performance. In their words, ". . . if [a position] is important but hard to fill, the reward must be high enough to get it filled anyway."¹³ Special rewards for decision-makers in the moshav and for routine workers in the kvutza should be expected.

In each settlement, however, other measures have developed which tend to insure that these positions are conscientiously and ably filled. The measures fall into two classes: those which modify positions and those which modify personnel. Since the underfilled positions in the two settlements are in a sense opposites, we would expect the adjustive measures to work in opposite directions. It will, therefore, be useful to contrast them wherever possible.

¹¹ For descriptions of the moshav type of settlement, see S. Dayan, *Moshav Ovdim*, Tel Aviv: Lion the Printer, 1947; S. N. Eisenstadt, *Age Groups and Social Structure*, Jerusalem: 1951, mimeo.; Y. Talmon-Garbier, "Social Differentiation in Co-operative Communities," *British Journal of Sociology*, 3 (1952) pp. 339-357; and H. Viteles, "Jewish Agricultural Settlements in Israel," *International Journal of Agrarian Affairs*, 2 (1955) pp. 37-49.

¹² This requirement is embodied in the standard-moshav constitution, an English translation of which is given in S. Dayan, *op. cit.* Article B, Section 4 states that, "the individual member [shall have] full personal responsibility for his farm."

¹³ Davis and Moore, *op. cit.*

ALTERATION OF POSITIONS

It is possible to decrease ineffectiveness resulting from underfilling of important positions by changing positional requirements so that they coincide more closely with available motivated skills. The kvutza would need measures tending to decrease the extent to which existing jobs require subordinacy and to increase the proportion of jobs permitting decision-making responsibility. In the moshav, measures operating in the opposite direction would be required.

There are a number of devices by which the kvutza decreases the proportion of subordinate routine jobs. First, *mechanization* of farm work helps reduce the amount of unskilled labor. Every tractor or combine purchased by the kvutza creates a position for another culture hero, a "tractorist," who by the standards of the community is a highly skilled worker. The kvutza has seven tractors compared to the moshav's four, but has only eighteen horses as against ninety-six in the moshav. The kvutza has also acquired several kitchen and laundry machines which further lessen the numbers of persons required for routine labor.

Second, *outside work* provides kvutza members with many opportunities for the use of decision-making skills. With the approval of the General Assembly, members may take positions outside of the community, returning all their earnings above expenses to the kvutza treasury. Kvutza Orah usually has ten or fifteen of these workers, engaged in activities such as guiding new settlements, co-ordinating confederation projects, or doing government work. Typically, outside workers are former managers of kvutza activities who have passed their physical prime. Often reluctant to return to physical labor, these individuals are permitted to work at jobs which effectively expand the occupational structure to include productive decision-making positions outside of the domestic kvutza economy. As a result, the relative need for routine labor is diminished. Moshav members, on the other hand, are generally quite unwilling to leave their farms for any sort of external work and do so, if at all, only for short periods of time.

Finally, within the kvutza occupational

structure, another measure has been employed which increases the supply of workers for routine jobs. The practice of *job rotation* requires that the holders of decision-making positions spend some of their work days at routine tasks. Even high ranking officials such as the Treasurer and Chief Coordinator are expected to spend two weeks waiting on tables in the collective dining hall. Male job rotation is, however, largely symbolic, having run into competition with the economic necessity for effective co-ordination; for women, it is a good deal more substantial: even trained nursery teachers must spend one-fourth of their work time in routine tasks such as kitchen work. This measure decreases the number of persons who must labor continually in subordinate positions. In the family-based economy of the moshav, nothing comparable to job rotation is found. Each adult worker must accomplish a number of tasks, but these remain fairly fixed. Certain specialized jobs such as tractor operation are regularly done by skilled workers who relieve the general farmer of the pressure to acquire even more skills than his farm already requires.

Moshav customs include two measures which tend to reduce the extent to which special knowledge and skill are needed by the individual farmer. First, Tamim handles as a community task the acquisition and distribution of technical agricultural knowledge. Moshav procedure in this regard contrasts with that of the kvutza, where the acquisition of new knowledge is largely left to individual managers who are expected to read pertinent literature on their own time and initiative. In the moshav, special committees consult with experts and technical sources to gain knowledge which is then disseminated to the members in the form of advice. This measure serves at once to increase actual skill and to reduce the number of independent decisions required of the individual. Second, the moshav has decreased its requirements by undertaking cooperatively a limited number of economic activities such as the raising of field crops. Although this tendency has progressed farther in other moshav settlements, traces are noticeable in Tamim. In thus moving slightly toward the kvutza system, the moshav reduces the proportion of decision-makers it

requires by delegating authority to the more efficient administrators among its members.

Since underfilled positions in the two settlements are virtual opposites, measures tending to reduce the numbers of such positions should tend to make the two occupational structures more similar in this regard. Despite these measures, however, there remains a disparity between the two settlements in actual work opportunities: Orah continues to require more routine workers, Tamim more responsible decision-makers. This difference is indicated in the estimates of members themselves about the degree of independence, freedom from direction, and necessity for thought and planning provided in their present jobs. On a three question Guttman quasi-scale, two-thirds of the moshav respondents said they had a high degree of actual responsibility as compared with less than one-half of kvutza respondents. (See Table 1.) Such differences in actual positional requirements would be

wise be inadequately filled. Migration and socialization practices work to this end in each settlement.

1. *Migration.* It is possible that the persons who originally migrated to the two settlements differed in their skills and work motivations. Information available only on those who are still residents indicates that the two populations were similar in having gone to Palestine from the same lands of origin and in having had as their purpose for migration the desire "to build a new life." The reasons which they say determined their decision to settle in each community are, however, quite different. More than twice as many kvutza as moshav respondents (73.7 per cent to 33.1 per cent) report that such socially oriented motives as the desire to build a just society, to change the nature of man, and to live in social solidarity were primary to them. Adherence to their socially oriented "religion of labor" may have made kvutza members more willing to do routine tasks. Although the data do not conclusively justify this inference, they do suggest that selective migration is one way in which a work force may be fitted to positional requirements.

Whatever the composition of the original population, the kvutza's requirement for a high proportion of routine workers has been filled somewhat by the continuous subsequent immigration of unskilled workers. But workers who settled permanently in the kvutza have slowly picked up skills which permit them to compete for jobs carrying decision-making responsibility. This has tended to sharpen the problem by reducing the numbers of workers with no choice but to accept routine jobs. A partial solution has been found in the practice of accepting trainees for limited periods of time. These comprise groups of young people, usually recent immigrants to Israel, who intend to live collectively. During their training they work for the kvutza but are neither politically nor socially members of it. Almost universally these trainees complain that instead of being taught advanced skills, they are directed by kvutza managers to perform unskilled labor. As one trainee put it:

We came here to learn how to be farmers, and they tell us that first we have to learn

TABLE 1. REPORTED RESPONSIBILITY IN WORK* IN PERCENTAGES

	Orah (Kvutza)	Tamim (Moshav)
High responsibility	46.8	67.7
Low Responsibility	53.2	32.3
Total	100 (N=126)	100 (N=161)
$\chi^2 = 12.66; P < .001$		

* The technique utilized for scale construction is described in S. Stouffer and associates, *Measurement and Prediction*, Princeton: Princeton University Press, 1950. In the formulation, pretesting, and administration of the questionnaires, the writer was assisted by Louis Guttman and members of his staff at the Israel Institute of Applied Social Research, Jerusalem. The sample consisted of more than 90 per cent of the adult members of each community, but contained fewer persons in the kvutza mainly because the kvutza population includes a higher proportion of such ineligible residents as trial members, trainees, and immigrant children.

expected to make for a continuation of differential scarcities in the two settlements, if other factors were equal. However, the most important "other factor," personnel, has not remained equal.

ALTERATION OF PERSONNEL

Modification of the skills and motivation of personnel is a second major way to insure the filling of positions which would other-

how to work. How long do I need to scrub the kitchen floor before I know how?

By contrast, the moshav has not absorbed such large numbers of trainees; it has favored instead the founding of new settlements for which it has attempted to supply advisors. When a national emergency made it necessary for the moshav to accept trainees, the farmers sought as helpers those youths who learned quickly and did not require continual supervision. When new members are accepted into permanent membership in the moshav, their capacity to accept full responsibility for the management of the farm is a major consideration.

Another way in which work forces are adjusted to prevailing requirements is through the emigration of individuals who don't fit. Emigrants from the kvutza frequently leave because they are unable to accept direction by others, or because they are "unsatisfied" with their jobs. As one such person put it:

I can't live in a kvutza because I can't stand to have anyone tell me where to plant this tree.

Moshav members who depart are usually unable to manage their farms successfully. Thus the remaining work force in each community contains a higher proportion of individuals willing or able to fill the requisite jobs.

2. *Training of Personnel.* Personnel may also be changed by modifying the characteristics of the individual rather than replacing him. In the kvutza there is a tendency to de-emphasize the importance for the ordinary worker of those skills which might make him a candidate for the top managerial positions. It is sufficient to know one's own branch, or even one's own place within it. A typical statement by one of the kvutza confederation leaders justifies the absence among ordinary workers of what has been described as "substantial rationality":

The ordinary farmer is incapable of grasping the over-all circumstances of a large farming enterprise. A man at work in the kvutza is familiar with only one or two aspects of farm management. It is planning that allows for

centralization of knowledge, adaptation of activities, and steering of work.¹⁴

Kvutza workers who accept this view tend to lower their level of aspiration and accordingly to become more content with routine jobs.

Kvutza socialization also tends to develop individuals whose aspirations for talent utilization do not exceed the likelihood that these talents will be used. In the collective nursery children are stereotyped from an early age by their nurses and other adults as leaders or non-leaders, a distinction which collective socialization helps to preserve into adult life. The children learn rapidly from whom they can and from whom they cannot get what they want. Such a "peck-order," not unusual among children, is notable in the kvutza for the earliness with which it is established, its persistence, the sharpness of the distinctions it draws between dominant and submissive types, and the extent to which the children accept the images of themselves held by others.

Moshav training, by contrast, heavily emphasizes individual responsibility. The daily routine of farm management rewards the farmer for effective decisions and punishes him for incorrect ones. Moshav public opinion, neither as omniscient nor as omnipotent as that of the kvutza, does not restrain the individual so effectively from deviant action. Independent decisions can be made and their correctness proved against objective circumstances. Children growing up under their parents' tutelage in the moshav are rewarded for taking individual responsibility in farm work at an early age. This distinguishes them from kvutza children who learn group responsibility, in which the individual plays his part by fitting into whatever role the group assigns him.

3. *Discussion.* Through a combination of such factors as selection and training, but not necessarily through differential rewards,¹⁵ members of the two communities

¹⁴ Lozinsky in Y. Messinger, ed., *Kvutzah Moshav Kibbutz*, New York: Hechalutz Pamphlets, 1949, p. 39.

¹⁵ Despite the relative scarcity of routine workers, differential rewards of "humor and diversion . . . self-respect and ego-expansion" continue to be attained by kvutza managers. Cf. Eva Rosenfeld, *op. cit.*, p. 771.

have been influenced toward appropriate work aspiration. If these measures have accomplished the effects toward which they tend, we would expect to find lower aspirations for work responsibility in the kvutza than in the moshav. That this is in fact the case is indicated in the responses of members to a Guttman quasi-scale composed of questions concerning *preference* for work which gives different degrees of independence, freedom from direction, and the necessity of thought and planning. Fewer than half of kvutza respondents compared with more than two-thirds of those in the moshav indicated that they would prefer a high degree of responsibility in work. (See Table 2.) These differences are slightly greater

majority in the kvutza (55 per cent) aspire to and have *low responsibility* in their work positions.

CONCLUSION

The data suggest that a number of measures aside from inequality can serve to increase the effectiveness with which positions are filled. The positional structure can be changed to coincide more closely with available motivated skills, and the skills can be modified in a number of ways other than by the unequal distribution of rewards.

Why have such measures not been utilized instead of inequality to permit either the survival or optimal adjustment of some completely equalitarian society? It is possible that some of these measures, such as the temporary influx of trainees, are not possible for most societies. Other measures, such as job rotation, might typically lead to more ineffectiveness than they reduce. It might also turn out upon investigation that such measures, though helpful, cannot alone attain maximum effectiveness in the filling of important positions.

But the possibility should not be overlooked that inequality is best understood in terms of consequences other than those by which Davis and Moore sought to explain it. They may have erred in stressing maximum effectiveness instead of the individual satisfaction which inequality typically brings to those powerful enough to control the distribution of rewards. Whether there have existed functional alternatives capable of attaining the latter consequences is problematic; if not, an adjustive explanation for the universality of inequality may well lie here, rather than in terms of maximum effectiveness which appears attainable by alternative means. The discovery of functional alternatives thus necessitates a more careful canvassing of the functional consequences by which cultural items are explained.

TABLE 2. REPORTED ASPIRATIONS FOR RESPONSIBILITY IN WORK, IN PERCENTAGES

	Orah (Kvutza)	Tamim (Moshav)
Desire responsibility	47.5	69.6
Do not desire responsibility	52.5	30.4
Total	100 (N=122)	100 (N=161)
$\chi^2=14.05$; $P<.001$		

than the differences in estimates of *actual* responsibility exercised in present jobs. This adaptation of personnel increases the likelihood that workers in both settlements will get a chance to do the kinds of jobs they desire, and accordingly, it may be assumed that these jobs will be done conscientiously. In fact, both settlements have about the same percentage of individuals (67 per cent in Orah to 71 per cent in Tamim) who report having the kind of job to which they aspire, i.e., who either aspire to responsible jobs and have them or do not aspire to responsible jobs and do not have them. Of all these "suited" workers, however, a large majority in the moshav (77 per cent) aspire to and have *high responsibility*, while a

SOCIAL STRUCTURE AND SOCIAL PARTICIPATION *

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THIS paper reports the initial findings of a study of participation in the policy formation process at the community level carried out in Valley City I and Valley City II.¹ The design of the study involved the development of a scale for measuring community participation and the administering of a basic schedule to a random sample of the adult population in each community in order to identify some of the factors associated with community participation.²

While this study originated in an interest in social participation as it relates to the policy formation process at the local level,

it subsequently became clear that the analysis of participation offers a strategic approach to the study of social structure. The immediate problem with which this paper is concerned is: Who participates to what extent in community affairs and what factors are associated with such participation? However, the more basic problem is concerned with the structural patterns of communities.

VALLEY CITIES I AND II

The two communities from which the data for this study were secured are somewhat different. Valley City I is a small town with an adult population of 2,000, situated on a main highway some fourteen miles from a university city of 40,000 population. It derives its livelihood largely from dairying, agriculture and lumber. Both its size and organization of activities are relatively stable, and it displays few cleavages or strong issues. The people generally oppose the introduction of new industries and insist they wish to keep the community essentially the same. The sample population consists of 260 randomly selected adults of both sexes.³

³A separate tabulation by sex of the data used in this paper does not reveal a sufficient difference to justify a separate analysis. There is no significant difference in the distribution of males and females on the social participation scale or their distribution between the income categories. There is, however, a significant difference at the .05 level in regard to the age and educational composition, females being over represented at the lower age levels and in the middle educational categories.

For the purpose of this paper, however, the important question is whether there is any difference between the sexes in regard to the relation of the three demographic factors to social participation scores. The pattern of relationship as shown in Tables 2, 3, and 5 is not changed when the sexes are tabulated separately. The only difference is that the relation of income and education to social participation is somewhat accentuated in the case of females.

Further, the pattern of distribution in the cross tabulations of the selected variables presented in Tables 4, 6 and 7 is the same for both sexes. The correspondence between the sexes in regard to the

* Revised version of paper read at the annual meeting of the American Sociological Society, September, 1954.

¹ The data for this paper are taken from an interdisciplinary study of policy formation currently in progress at the University of Oregon under the auspices of the Cooperative Program in Educational Administration in the Northwest and financed by the W. K. Kellogg Foundation. The author is indebted to his colleagues and the graduate students who have worked as members of the research team.

² The sample population for Valley City I was selected by applying a table of random numbers to a list of all residents in the community. The list was checked in advance and found to be 98 per cent complete and accurate. In Valley City II a three stage sampling procedure was employed. Using a table of random numbers approximately one third of the blocks were sampled out. Within each sample block alternate households were selected, and within each household one respondent was chosen by random number.

The basic schedule was pre-tested in a third community and administered by individual interview to the sample population in each of the subject communities. The interviewers were advanced students who were given extensive training in the use of the schedule and supervised in the field by team supervisors.

An "adult" was defined as one who assumed the role of an adult in the community by virtue of having completed his education and entered the labor market. Five per cent of the Valley City I sample population and three per cent of the Valley City II sample were under 21 years of age but were out of school, employed, and in most instances married. All those over 21 years of age who were regular students in a nearby university were excluded from the study.

Valley City II is located three miles from the university city mentioned above and is part of a growing metropolitan area. Its economic base is primarily lumber and related activities, including several large pulp and lumber mills. It has a population of 16,000, having increased 250 per cent since 1940; it displays many of the internal strains associated with rapid growth and has a high rate of population mobility. During recent years there have been a series of sharp issues regarding city government, streets, zoning and public power facilities. The sample population consists of 752 randomly selected adults of both sexes.

THE GENERAL COMMUNITY PARTICIPATION SCALE

For the purpose of this study it was necessary to develop an appropriate measure of social participation as conceived. Most previous efforts to measure participation have been in terms of membership in associations, such as Chapin's Social Participation Scale, or single channel participation, such as voting. The relating of participation to the policy formation process in this study made desirable an index that would reflect activity in a variety of channels as well as formal and informal involvement. The scale used in this study is based upon sixteen questions (scattered throughout the basic schedule) that were regarded as constituting or reflecting participation in community affairs. These questions pertained to such overt behavior as voting in elections; frequent discussion of educational, governmental and civic affairs with members of one's family, friends and officials; membership in organizations and associations; taking an active part in local educational or governmental issues; attending meetings where community affairs were a major subject of consideration; and associating frequently with community officials and leaders.

The method of scoring was to give each respondent one point for each question answered in the affirmative or for frequency of activity above a given level. The resulting

relation of the selected demographic variables and social participation means that any interpretation of the uniformities in the data must apply equally to males and females.

individual scores ranged from zero to ten, thereby constituting a simple eleven point scale to serve as a measure of the extent of participation.⁴

THE PARTICIPATION PROFILE

The General Community Participation Scores for the sample populations of the two communities are given in Table 1. As is indicated, the distributions of individual

TABLE 1. DISTRIBUTION OF SAMPLE POPULATION BY COMMUNITY PARTICIPATION SCORES

GCP Score	Valley City I		Valley City II	
	No.	Per Cent	No.	Per Cent
0	63	24.2	145	19.3
1	55	21.1	147	19.5
2	36	13.8	106	14.1
3	26	10.0	99	13.2
4	23	8.8	74	9.8
5	14	5.4	60	8.0
6	15	5.8	30	4.0
7	10	3.8	23	3.1
8	9	3.5	18	2.4
9	4	1.5	24	3.2
10	5	1.9	26	3.5
Total	260	99.8	752	100.1

scores for the two communities are very similar. In both instances there is a distinct J curve with the greater part of the population concentrated on the low end of the scale. Over 50 per cent of the respondents have scores of 2 or less; over 75 per cent have scores of 4 or less; and only 16 per cent have scores of 6 or more. The principal difference between the two distributions is that in Valley City II the number of respondents having scores of 0 and 1 is the same, and the mean score is somewhat higher—2.94 as compared to 2.63 for Valley City I. This difference is apparently due to the larger number of respondents in Valley City II receiving scale points on the basis of having "frequently" discussed designated community affairs with members of their families or with friends. This higher rate of "frequent" discussion seemingly reflects the presence of issues or problems in a rapidly growing city. In view of the difference between the two communities, it is significant

⁴ It is recognized that this scale does not measure either the intensity or effectiveness of participation but is limited to amount or extent of the kinds of activity indicated.

that the two distributions are so nearly alike. This, and the several comparable distributions reported in the literature, suggest the possibility of a consistent structural pattern in American culture.⁵

SOME VARIABLES RELATED TO PARTICIPATION

Education. As shown in Table 2, the mean participation scores by educational levels for the two communities correspond closely. Both sets of data show a continuous and

TABLE 2. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY EDUCATIONAL LEVELS

Education	Valley City I		Valley City II	
	No.	Mean Score	No.	Mean Score
Grades 1-6	12	0.75	42	1.45
Grades 7-9	101	1.63	240	2.01
Grades 10-12	105	2.74	370	3.11
College (non-grad)	28	5.25	63	4.79
College (graduate)	13	5.77	34	5.62
Total	260	2.63	749	2.92

marked rise in mean score with rise in level of formal education.⁶ Those in the lower educational categories show somewhat higher mean scores in the second community than in the first. Here again, many who might

⁵ See especially Julian L. Woodward and Elmo Roper, "Political Activity of American Citizens," *American Political Science Review*, 44 (1950), p. 876. Compare also: Frederick A. Bushee, "Social Organizations in a Small City," *American Journal of Sociology*, 51 (1945), pp. 217-226; Herbert Goldhamer, *Some Factors Affecting Participation in Voluntary Associations* (Unpublished Ph.D. Dissertation, University of Chicago, 1943); Mirra Komarovsky, "The Voluntary Associations of Urban Dwellers," *American Sociological Review*, 11 (1946), pp. 686-698, and "A Comparative Study of Voluntary Organizations of Two Suburban Communities," *Publication of the American Sociological Society: Papers*, May, 1933, pp. 83-93; George A. Lundberg, Mirra Komarovsky, and M. A. McInerny, *Leisure: A Suburban Study*, New York, 1934, pp. 128-129; W. Lloyd Warner and Paul S. Lunt, *The Social Life of a Modern Community*, New Haven: Yale University Press, 1941, pp. 332-333.

⁶ Compare: Donald G. Hay, "The Social Participation of Households in Selected Rural Communities of the Northeast," *Rural Sociology*, 15 (1950), pp. 146-147; Leonard Reissman, "Class, Leisure, and Social Participation," *American Sociological Review*, 19 (1954), pp. 79-80. Very few studies of social participation have isolated education as a factor but rather include it in a general social status rating.

otherwise have received scale scores of 0 or 1 received slightly higher scores through having discussed current issues "frequently" with family or friends. In both communities the most marked increase in mean score is between the high school and college levels. At the college levels the respective mean scores are very similar: 5.25 and 4.79 at the college non-graduate level and 5.77 and 5.62 at the graduate level. On the basis of these data it would appear at first sight that the relationship between educational level and participation score is simple and direct. However, as is indicated below, the relationship is somewhat complex.

Income. When mean participation scores are arranged by income levels, a distinct relationship again is found.⁷ (See Table 3.)

TABLE 3. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY INCOME LEVELS*

Income	Valley City I		Valley City II	
	No.	Mean Score	No.	Mean Score
Under \$2,000	36	1.64	90	1.88
\$2,000-\$3,999	102	2.51	226	2.51
\$4,000-\$9,999	99	2.90	382	3.38
\$10,000 and over	12	4.75	30	4.57
Total	249	2.65	728	2.97

* The income figures used are those of the respondent alone if single and the combined income of husband and wife if the respondent is married. The incomes of children and other relatives in the household are not included. In both communities 87 per cent of the respondents were married and living with their spouses. This income formula was used primarily to reflect the actual disposable income of the respondents.

In both instances the rise in mean score with rise in income level is continuous and approaches a straight line. In both instances those with incomes of \$10,000 and above

⁷ Compare W. A. Anderson, "Family Social Participation and Social Status Self-Ratings," *American Sociological Review*, 11 (1946), pp. 256-257; Emory J. Brown, "The Self as Related to Formal Participation in Three Pennsylvania Rural Communities," *Rural Sociology*, 18 (1953), pp. 313-321; Floyd Dotson, "Patterns of Voluntary Association Among Urban Working Class Families," *American Sociological Review*, 16 (1951), pp. 687-693; Donald G. Hay, *op. cit.*; Mirra Komarovsky, "A Comparative Study of Voluntary Organizations of Two Suburban Communities," *op. cit.*, p. 90; William G. Mather, "Income and Participation," *American Sociological Review*, 6 (1941), pp. 380-383; Leonard Reissman, *op. cit.*, pp. 79ff.

have scale scores approximately 2.5 times higher than those with incomes below \$2,000. Here again one might be tempted to assume a direct relationship. However, a breakdown of the data for Valley City II reveals a more complex relationship for both education and income.

Table 4 shows the mean participation scores for Valley City II by both income and educational levels. In order to avoid too small a number of respondents in each category, the number of levels of education and income have been reduced to three. When education is held constant, there is a

\$5,999; and from 2.00 to 6.40 for those with incomes above \$6,000. It is to be noted, however, that the increase in mean score with rise in educational level is more marked for those in the highest income category. Thus, the relation between educational level and participation score holds, regardless of income, but to a differential extent depending upon income level.

In brief, neither of the two variables, income and education, operates independently. The original apparent simple relationship between both education and income and participation score may then be due to the

TABLE 4. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY EDUCATIONAL AND INCOME LEVELS FOR VALLEY CITY II

Educational Levels	Under \$3,000		\$3,000- \$5,999		\$6,000 and over		Total
	No.	Mean Score	No.	Mean Score	No.	Mean Score	
Grades 1-9	82	1.65	156	2.19	32	2.00	270
Grades 10-12	56	2.64	226	3.04	82	3.93	364
College	19	3.68	40	4.28	38	6.40	97
Total	157	2.25	422	2.84	152	4.74	731
							2.98

differential relation of income to participation score. For those whose education did not go beyond the 9th grade the respective mean scores for the three income levels shown are 1.65, 2.19 and 2.00. This would indicate that income is not related when education is below a given point. In contrast, for those whose education stopped at the 10-12 grade level there is an over-all rise in mean participation score from 2.64 at the \$3,000 and under level to 3.93 at the \$6,000 and above level. For the college group the mean score is relatively high, 3.68, at the lowest income level, rises to 4.28 at the middle income level, and reaches 6.40 at the upper income level. Thus, the original relationship between income and participation seems to hold only if education is above a given level.

While all income groups have low scores (see Table 4) when formal education does not go beyond the 9th grade, there is a definite rise in the mean scores as education rises for each of the three income groups. The rise in mean score from grade 1-9 to the college level is from 1.65 to 3.68 for those with incomes under \$3,000; from 2.19 to 4.28 for those with incomes of \$3,000-

combined presence of these two variables. Because the income curve tends to be an education curve and vice versa, the two variables tend to be present or absent together, thereby making for a compound effect.

There is some evidence that education is the more significant variable. Education at the college level results in high scores in all income categories, while the reverse is not true. In no instance does high income raise the mean score for the low education groups above the mean for the entire population.

Age. In the case of age, only a rough comparison between the two communities is possible because of a change made in the age categories used in the second community. Even so, as shown in Table 5, there is a tendency for participation scores to climb during the twenties and thirties and to decline in the later years.⁸ In Valley City I

⁸ Compare Selz C. Mayo, "Age Profiles of Social Participation in Rural Areas of Wake County, North Carolina," *Rural Sociology*, 15 (1950), pp. 242-251. The main difference between the findings of the Mayo study and the one reported here is that the decline in participation scores appears at an earlier age in the latter case.

TABLE 5. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY AGE LEVELS

Age	Valley City I		Valley City II	
	No.	Mean Score	No.	Mean Score
21-24 years			52	2.04
21-29	41	2.95		
25-34			193	2.82
30-39	66	3.30		
35-44			185	3.31
40-49	58	2.95		
45-54			145	3.39
50-59	34	1.79		
55-65			82	2.85
60-69	33	2.24		
65 and over			72	2.15
70 and over	14	1.57		
Total	246	2.71	729	2.94

the decline sets in after the thirties and reaches a low mean score of 1.57 for those over 70 years of age, while in Valley City II the mean score continues to rise until age 45-54 and then declines. The lack of correspondence between the two communities for the middle age groups may possibly be explained by the fact the income and education of the middle age groups in Valley City I are lower than in Valley City II. The income and education levels of those in the lower and upper age groups is the same for both communities.

As with education and income, the relationship of age to participation score is not simple. The actual relation of age to participation is more nominal, particularly at the upper age level, than for the first two factors examined. What appears to be an age factor may rather be an income and education factor due to the differences in income and education composition of the age categories. Using the data from Valley City II and holding education constant (see Table 6) there is a rise in mean score for all three educational levels from the lower

to the middle age groups, but the tendency for the mean score to drop off at the upper age level is minimized. For each educational level the mean score of those 55 years of age and older is definitely above that of the 21-34 age group and only slightly below that of the 35-54 age group. This suggests that advanced age itself is not so significant a factor as it first appeared.

The limited relevancy of age as a factor is further indicated when age is held constant and mean scores are calculated by educational level. For all three age categories (see Table 6) the mean score is low for those whose education did not go beyond the 9th grade, 1.30, 2.28 and 1.90 respectively. In the case of the 10-12 grade level the corresponding scores rise to 2.81, 3.36, and 3.16. At the college level the rise in mean score continues for all age groups but is accentuated for the 35-54 and 55 and above levels, being 5.80 and 5.37 respectively. The lower age group rises to 3.81. At any (educational) level the difference between the age groups is not great except in the case of the 21-34 college group who have a low mean score of 3.81 as compared to scores above 5.00 for those in the upper age groups. It may be that continued school attendance delays the assumption of adult roles.

One of the reasons the general population shows a drop in mean participation score in the upper age groups may be the difference in the educational composition of the several age levels. In Valley City II the proportion of the population that has not gone beyond the 9th grade is 69.5 per cent for those 55 years of age and older, 37.7 per cent for those 35-54 years of age, and only 9.2 per cent for those 21-34. This situation alone would tend to produce a lower participation rate if education is as significant

TABLE 6. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY AGE AND EDUCATIONAL LEVELS, VALLEY CITY II

Education	Age						Total	
	21-34		35-54		55 and Over			
	No.	Mean Score	No.	Mean Score	No.	Mean Score	No.	Mean Score
Grades 1-9	47	1.30	124	2.28	107	1.90	278	1.96
Grades 10-12	166	2.81	154	3.36	32	3.16	352	3.08
College	32	3.81	51	5.80	15	5.37	98	5.09
Total	245	2.65	329	3.33	154	2.50	728	2.92

TABLE 7. MEAN GENERAL COMMUNITY PARTICIPATION SCORES BY INCOME AND AGE LEVELS,
VALLEY CITY II

Income	No.	Age			No.	Mean Score	No.	Mean Score	Total
		21-34	35-54	55 and Over					
Under \$3,000	29	1.79	40	2.60	74	2.09	143	2.17	
\$3,000-\$5,999	162	2.60	193	3.16	58	2.45	413	2.84	
\$6,000 and over	48	3.77	90	4.23	14	5.86	152	4.24	
Total	239	2.74	323	3.39	146	2.60	708	3.01	

as it appears and if it operates throughout the life span.

Somewhat the same relation exists between age and income as between age and education. (See Table 7.) If income is held constant, the age factor operates differentially in the separate income groups.

For those with incomes under \$3,000, the mean participation score rises from 1.79 for the 21-34 year old group to 2.60 for the 35-54 year old group and drops to 2.09 for those over 55 years of age. The \$3,000-\$5,999 income group has a mean score of 2.60 in the first age group, rising to 3.16 during the middle years and dropping somewhat to 2.45 in the later years. Thus, holding income constant does not appear to modify the relation of mean score to age for the two lower income levels. In contrast, those with incomes of \$6,000 and above show a continuous rise in mean score throughout the age groups and a sharp rise to 5.86 in the later years. High income appears to reverse the relationship for the upper age group.

When age is held constant and the mean scores are related to income, there is a rise in participation with rise in income in all instances. (See Table 7.) The increase in mean score within age groups is continuous in all instances but accentuated in the case of the upper age group at the \$6,000 and above income level. As with education, the data indicate that income modifies the relation of age to participation. Because the mean income of the older age group is lower than the middle age group, the drop in mean scores for the total population may in part reflect an income differential.

SUMMARY

The data presented here for two separate and somewhat different communities indi-

cate a similarity both in the distribution of participation scores and in the relation between three selected variables and mean participation scores. These data provide added evidence of a characteristic structuring of communities in regard to who participates and to what extent.

What appears at first sight as a simple and direct relation between the three selected factors and mean participation scores turns out upon a further breakdown of the data to be a complex set of interrelationships. Education and income tend to vary together, thereby producing a compound effect. The relation of age and participation is not so significant as it would appear, for it reflects the operation of education and income. There is evidence that educational level is the most significant variable and age the least.

AN INTERPRETATION

It may be assumed at the outset that to attribute participation as measured here directly to the effect of education, income, or age, or even combinations of these factors, would be too easy an explanation. It is generally recognized that traits such as those considered do not operate directly but are part of a wider complex of circumstances. What is called for at this stage of investigation is an explanation that, while not giving direct causal efficacy to the factors in question, will yet give full recognition to their presence or absence.

One possible approach would be to draw upon role behavior theory as a theoretical framework for analysis. The basic proposition in role behavior theory is that social behavior is primarily learned behavior and is a function of the position the individual occupies in the social system. Thus, just as much of the behavior of a male, a teacher,

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or a child is a consequence of occupying the position or status of a male, a teacher, or a child in our culture, so social participation which involves particular kinds of acts is a consequence of an individual's having a position in the social structure that calls for that kind of behavior.⁹

From the point of view of role behavior theory, it may be held that people in different educational, income, or age categories hold differential positions in the social system and, thereby, come to have differential behavior patterns, including a tendency to participate or not participate in community affairs. The proposition that social participation is a form of role behavior is equally applicable to both males and females and hence meets the requirement specified above. A person with low income and low formal education will, in general, and regardless of sex, occupy a different position in the social system than another with high income and high educational achievement. Included with differences in social attitudes, food habits, dress, and a host of other activity areas will be differences in the part played in the decision making process of the wider community. It is suggested then that the differences reported above in the participation scores of the different educational, economic, and age categories reflect differences in the role positions of the actors.

Within the framework of role behavior theory a number of more specific interpretations of the relationships in question may be made.

The relevancy of social participation to occupational and other roles may well be a significant variable. The nature of community activities and participation in them is frequently such that much is to be gained by a professional or business person who becomes involved. It may be a matter of gaining recognition or publicity or insuring policy decisions that will be favorable to one's economic endeavors. Even in the case of the wife of a business or professional man, participation may be highly relevant to the

activities of her husband and hence part of her role.¹⁰ In contrast, participation on the part of an unskilled laborer may not be functionally relevant and may even be dysfunctional. The matter of relevancy may also apply to the less obvious and less tangible situations involving prestige positions in the social system. Here again, participation may be a means of gaining or maintaining a form of recognition not sought by everyone.

There is more involved, however, than the actual functional relevancy of participation. One would expect to find a difference between income and educational categories in their ability to perceive the relevancy of participation in community affairs. Those in the lower socio-economic levels may not be able to see how certain policy decisions will affect them or how they might be able to participate in the process of decision making.¹¹

Closely related to the matter of relevancy is the question of the expectations of others. From one point of view the essence of role behavior is the existence of a set of behavior norms widely recognized as appropriate for designated positions. The occupants of given positions then tend to respond to these expectations and act accordingly. As applied here, those in the upper educational and income levels will likely hold positions where participation is among the set of expectancies. In every community there are a number of people who can readily testify to the pressures upon them to assume responsibility and give their active support to community projects. For the most part these people have roles characteristic of the upper socio-economic levels.

Role behavior operates in yet another way to produce differential participation. Social participation frequently requires a number of skills or capacities such as verbal skills,

¹⁰ W. A. Anderson has found that social participation tends to be a family trait, "The Family and Individual Social Participation," *American Sociological Review*, 8 (1943), pp. 420-424.

¹¹ The relation between lack of awareness or understanding of community life and processes and inactivity is interestingly developed by C. R. Hoffer, "The Community Situation and Political Action," *American Sociological Review*, 4 (1939), pp. 663-669. Cf. F. Stuart Chapin, *Contemporary American Institutions*, New York: Harper and Brothers, 1935, pp. 27ff.

⁹ For a suggestive analysis of the relation between social structure and participation see Bernard Barber, "Participation and Mass Apathy in Associations," in Alvin W. Gouldner (ed.), *Studies in Leadership*, New York: Harper and Brothers, 1950, pp. 477-504.

knowledge about procedures and means, acquaintance with the latent social structure, professional and technical skills, access to the leadership structure, time, money, and even energy. These same skills and capacities are also the ones most often associated with the roles of those in the

upper social and economic levels. Participation is less likely to be congenial to a person whose education did not go beyond the ninth grade and who holds an unskilled job in a factory than another who has a broader educational background and is engaged in managerial activities.

A COMPARISON OF THE CHICAGO AND HARVARD STUDIES OF SOCIAL CLASS DIFFERENCES IN CHILD REARING

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IN 1951-52 Sears and his colleagues¹ made a study of social class and child-rearing practices which is to some extent comparable with a study made in 1943 by Davis and Havighurst.² The results of the two studies agree in some respects and disagree in others. Consequently, it seems useful to present such results of the two studies as are comparable, so as to permit readers to make their own comparisons and draw their own conclusions.

The Samples. The Harvard interviews were held with mothers of kindergarten children and dealt with the training of the kindergarten child only. The Chicago interviews were held with mothers of pre-school age children but dealt with every child of the mother. The Chicago study dealt with the 107 middle- and 167 lower-class white children of 48 middle- and 52 lower-class white mothers. The Harvard study, on the other hand, dealt with 201 middle-class and 178

lower-class white mothers, and with the same numbers of children. The interviewers were college-educated women who were specifically trained to conduct interviews with the particular instrument used in each study.

In order to make the data more nearly comparable, the Chicago data which involved all the children of a mother have been restudied by taking the one child nearest the age of 5. This makes the Chicago medians somewhat different, but not greatly so, from those that appear in the original article. Also, to make the data more comparable the Harvard data on the age of beginning and completing weaning and toilet training have been reworked to show medians rather than means.

As would be expected, the nationality backgrounds of the two samples are different.

TABLE 1. NATIONALITY * OF MOTHERS,
IN PERCENTAGES

Nationality Group	Chicago		Boston	
	M	L	M	L
American	..	..	56	43
British, or Canadian	..	..	7	17
American, British, or Canadian	56	11	..	..
Irish	4	19	6	6
Italian, Spanish, Greek	0	8	2	17
Russian, Bulgarian, Yugoslavian, Hungar- ian, Polish, Lithuanian	27	30	23	11
German, Dutch or Scandinavian	15	15	4	3
Mexican	0	17	0	0
Not ascertained	0	0	2	3
Jewish	27†	2†	32†	9†
Number of mothers	48	52	198	174

* Nationality means birthplace of mother's parents.

† Included in nationality groups listed above.

¹ Robert R. Sears, Eleanor E. Maccoby and Harry Levin, *Patterns of Child-Rearing*. In press. See also, Eleanor E. Maccoby and Patricia K. Gibbs and the Staff of the Laboratory of Human Development, Harvard University, "Methods of Child Rearing in Two Social Classes," in *Readings in Child Development* by William E. Martin and Celia Burns Stendler; New York: Harcourt Brace and Company, 1954.

We wish to thank Robert R. Sears and John W. M. Whiting and particularly Eleanor E. Maccoby for their courtesy in sharing their data with us. One of us visited the Harvard group and compared notes with them, after which Dr. Maccoby supplied us with such data from the Harvard Study as were needed for comparative purposes and advised us on the format of the tables.

² A. Davis and R. J. Havighurst, "Social Class and Color Differences in Child-rearing," *American Sociological Review*, 11 (1946), pp. 698-710.

Nationality was defined as the country of birth of the mother's parents. If one parent was foreign-born, the mother was assigned to a foreign nationality. Table 1 shows the ethnic composition of the two samples. The occupational status of the fathers in the two samples is shown in Table 2, based on

TABLE 2. OCCUPATIONAL STATUS* OF FATHERS,
IN PERCENTAGES

Occupational Rank	Total Group	Chicago		Total Group	Boston	
		M	L		M	L
1	21	44	0	23	44	..
2	17	35	0	17	31	..
3	4	8	0	21	24	17
4	19	13	24	9	1	20
5	15	0	29	17	..	36
6	21	0	41	8	..	17
7	3	0	6	5	..	10
Number of fathers	100	48	52	372	198	174

* Based on Warner's Occupational Rating Scale.

the Warner scale of occupations. The Boston sample of lower status parents averages somewhat higher in status than the Chicago sample, due to the inclusion in the Boston lower status sample of a number of lower-middle people.

Only 27 per cent of the Boston lower status sample are in the bottom two occupational rankings, while 47 per cent of the Chicago sample are at these two lowest levels. Therefore, the two lower status samples are not easily comparable. However, the report of the Boston study indicates that there was little difference between the upper and lower halves of the lower status sample in child-rearing behavior, and the same kinds of differences between the Chicago and

Boston studies would have been found if the Boston lower status sample had been restricted to the lowest occupational levels.

The Boston sample was made up of families having a child in kindergarten in the public schools of two sections of the Greater Boston metropolitan area. Interviews were actually obtained with 80 per cent of the mothers of kindergarten children in these particular schools. The Chicago sample of middle-class mothers came from two nursery schools on the South Side of Chicago and from a middle-class apartment area on the North Side. The Chicago lower-class mothers came from three areas on the South Side of Chicago, and most of them did not have children in nursery schools. Interviews were secured with them by passing from one family to another in areas of poor housing. Clearly the Chicago sample is far from a random sample. The Chicago study was aimed primarily at studying individual differences in personality among children in a family and relating them to the children's experience in the family; and for this purpose it did not seem necessary to have representative social class samples. The social class comparisons were initially thought of as a by-product of the study. The Boston sample would seem in some respects to be more representative, although its being limited to mothers of children in public schools caused the exclusion of Catholic mothers who send their children to parochial schools. The Chicago sample had a number of such Catholic mothers, as well as a few upper-middle class mothers whose children were in a private school.

Feeding and Weaning. Table 3 summarizes the comparisons on feeding and weaning,

TABLE 3. FEEDING AND WEANING OF CHILDREN

	Chicago		Boston	
	M	L	M	L
Per cent of children ever breast-fed	83	83	43	37
Per cent of children breast-fed only	6*	17*	..	..
Median duration of breast-feeding (for those ever breast-fed)	3.4 mo.	3.5 mo.	2.4 mo.	2.1 mo.
Median age at beginning weaning	..	..	9.1 mo.	8.2 mo.
Median age at completion of weaning	10.3 mo.*	12.3 mo.*	12.0 mo.	12.6 mo.
Per cent of children weaned sharply	20	15	..	..
Mean score, severity of weaning (1:mild; 9:severe)	..	..	4.9	4.9
Per cent of children fed "when hungry"	4*	44*	..	..
Mean score, scheduling of feeding (1:complete self-demand; 9:rigid schedule)	..	..	5.1	4.6

* Difference significant at the 5 per cent level or lower.

which appear to indicate the following: (1) a regional difference in the amount of breast feeding; (2) a tendency for more breast feeding by lower-class Chicago mothers than by either group of Boston mothers; (3)

allowed to go farther away from the house during the day. This is probably in agreement with the Chicago finding of age at which children were allowed to go downtown alone.

TABLE 4. TOILET TRAINING

	Chicago		Boston	
	M	L	M	L
Median age of beginning of bowel training	7.5 mo.*	9.1 mo.*	9.6 mo.	9.9 mo.
Median age of completion of bowel training	17.8 mo.	18.2 mo.	18.6 mo.*	16.4 mo.*
Methods of treating children when they soil after training was begun; per cent of mothers				
Slap or spank or whip	13*	40*		
Mother shows disgust	2*	21*		
Scold	11	14		
Talk with or reason with	22	14		
Do nothing, ignore it	51*	11*		
Number of mothers	48	52		
Mean score, severity of toilet training (1:mild, 9: severe)	..	..	3.8*	4.6*

* Significant at 5 per cent level or lower.

middle-class Chicago mothers completed weaning their children earlier than middle-class Boston mothers; (4) a strong tendency for lower-class Chicago mothers to use more of a self-demand schedule in feeding than was used by either Boston group. It is in the area of feeding and weaning that the two studies differ most.

Toilet Training. Table 4 compares the data on bowel training. Chicago middle-class mothers began bowel training earlier than lower-class mothers, while there was no class difference among Boston mothers in this respect. On the other hand, Boston lower-class mothers reported completion of bowel training at an earlier age than middle-class mothers, while there was no class difference among Chicago mothers. In both studies lower-class mothers were reported to be more severe in punishment in relation to toilet training.

Restrictions on Movements of Children Outside of Home. The Chicago mothers reported as follows:

- Age at which boys and girls might go to the movies alone—lower class reliably earlier.
- Time at which boys and girls are expected in at night—middle class reliably earlier.
- Age at which boys and girls go downtown alone—middle class reliably earlier.

The only Harvard data which are comparable indicate a tendency (not quite significant) for middle-class children to be

TABLE 5. REQUIREMENTS FOR CHILD TO HELP IN HOME

	Chicago	
	M	L
Age child expected to begin helping at home		
2-5 years	58*	35*
6-8	32	45
9 years or more	10	20
Number of mothers reporting	41	51
	Chicago	
Age child expected to help with younger children	Younger*	Older*
Age girls expected to begin to cook	Younger*	Older*
Age child expected to dress self	No class difference	
Average age at which girls expected to help with dishwashing	No class difference	
Boston		
M	L	
Per cent of mothers who have given child at least one regular job to do around the house	38	40
Mean score, requirements for child to be neat and orderly in house, e.g., hang up own clothes, etc. (1: no requirements, 9: strict requirements)	5.7	5.6

* Class differences reliable at 5 per cent level or lower.

Expectations for Child to Help in Home. Table 5 summarizes the comparative data on what is expected of children in helping at home. None of the Boston class differences is reliable, while the Chicago data indicate a tendency for middle-class mothers to expect children to be helpful earlier than lower-class mothers do.

Parent-child Relations. There were a number of possible comparisons of parent-child relations, which will be summarized briefly. The amount of care-taking of children by fathers shows no class difference in either study. But when the nature of affectional relationships between father and children is evaluated, the lower-class father is found to be reliably less affectionate in the Boston study, while in the Chicago study the lower-class father "plays with" his children more, but the middle-class father teaches and reads to his children more. The studies are somewhat comparable on the matter of the display of aggression in the home (excluding aggression toward siblings). There are no reliable class differences in either study in this respect.

Summary of Agreements between the Studies. It will be seen that there are both agreements and disagreements between the results of the Chicago and Boston studies. The principal agreements between the two studies are the following:

- Lower class are more severe in punishment in toilet-training.
- Middle class have higher educational expectations of their children.
- No class difference in amount of care given children by father.
- No class difference in display of aggression by children in the home (excluding aggression toward siblings) (data not shown here, but available to the authors).
- Middle class children allowed more freedom of movement away from home during the day.

Discussion of Disagreements between the Studies. In discussing the disagreements between the two studies it seems important to determine to what extent the Boston study is a replication of the Chicago study. The interviewing methods used were rather similar, and some nearly identical questions were asked. However, the two samples are not strictly comparable. As we learn more about

social structure in the United States, it becomes clear that one should not attempt to generalize concerning child-rearing to an entire social class from a sample in one part of the country, even if it is a representative sample. There may be cultural differences between two samples of apparently similar occupational status, due to regional differences, religious differences, and differences of nationality background, all of which may have been operating in the studies being considered here. Furthermore, there may be differences between different occupational groups within the same social class.³

Of considerable importance is the limitation imposed by the method of securing data. To an unknown extent, mothers give what they regard as the "expected" or "appropriate" answers when telling how they raise their children. For instance, in Table 6 it will be seen that the Boston lower-class

TABLE 6. AGGRESSION CONTROL

	Chicago	
	M	L
Per cent of families where mothers let children "fight each other so long as they do not hurt each other badly"	82*	42*
	Boston	
	M	L
Mean score, permissiveness for aggression (1: not at all permissive, 9: entirely permissive)		
Toward siblings	4.7	4.5
Toward other children in the neighborhood	5.1*	4.6*
Toward parents	3.6*	2.8*

* Difference significant at 5 per cent level.

mothers report themselves as less permissive of aggression by their children toward other children in the neighborhood. But this is difficult to fit with the fact that lower-class children fight more than middle-class chil-

³ Daniel Miller and Guy E. Swanson of the University of Michigan have reported finding differences in child-rearing practices between two occupational groups at the same social class level, one group working in a bureaucratic situation with a maximum of order, structure, and routine in their work, while the other group worked in a changing, competitive industry with a premium on initiative, flexibility and mobility in their work.

dren do—a fact on which observers of the social behavior of children agree. Perhaps the fact that mothers were talking about young children (5-year-olds) was significant here; or perhaps the greater frequency of fighting by lower-class children actually brings out more of a feeling on the part of their mothers that they should restrain their children's aggression.

It is conceivable, for instance, that middle-class mothers are defensive about their *severity* and therefore claim to be less punitive or threatening than in practice they are observed to be; whereas lower-class mothers are defensive about their children being *dirty* and *violent* and therefore claim to be more punitive with regard to their children's soiling and fighting than such parents are observed to be. At any rate, this re-enforces the conviction of the present writers that the interview is not nearly so good as par-

TABLE 7. TECHNIQUES OF DISCIPLINE

	Chicago	
	M	L
Per cent of mothers mentioning various procedures as "most successful ways of getting children to obey"		
Reward or praise	78*	53*
Reason	53	57
Threaten or scold	53	55
Deprive of meal	0	6
Isolate	13	17
Stand in corner, sit in chair	13	19
Spank or whip	53	51
Number of mothers	45	47
Boston		
	M	L
Mean score, extent of use of each technique (1: no use, 9: extensive use)		
Reward	4.6	4.9
Praise	4.8	4.8
Reason	5.0	4.8
Scolding statements involving withdrawal of love	6.4*	6.0*
Deprivation of privileges	4.6*	5.1*
Isolation	5.7	5.5
Physical punishment	3.9*	4.8*

* Difference significant at 5 per cent level.

TABLE 8. AGENTS OF DISCIPLINE, IN PERCENTAGES OF FAMILIES

	Chicago	
	M	L
Who punishes children most?		
Father	2	8
Mother	81	85
Both the same	17	8
Boston		
	M	L
When both parents are present, which one disciplines the child?		
Father	29	32
Mother	39	42
Both or either	32	26

ticipant observation for securing data both on the behavior and the attitudes of parents toward their children.

The disagreements between the findings of the two studies are substantial and important. The interviewing seems to have been competent in both studies. Inadequacies of sampling in both studies may be a source of at least some of the differences. Changes in child-rearing ideology between 1943 and 1952 may be in some measure responsible for the differences. The problem of interpreting the statements of mothers answering identical questions about their children who are exposed to quite different environmental stimulation is a major one.

TABLE 9. EDUCATIONAL EXPECTATIONS FOR CHILDREN

	Chicago		Boston	
	M	L	M	L
Per cent of mothers desiring for child				
Grammar school only	0	0	0	0
High school only	7*	35*	3*	23*
High school, reservations (unless child very anxious for college, earns own way)			6*	25*
College, with reservations (unless child doesn't want to go, or financial reverses)			28	32
College	93*	65*	52*	17*
Graduate school (including medicine, law)			10	1

* Class differences highly significant.

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INTERVIEWER EFFECT ON SCALE REPRODUCIBILITY

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IN administering Guttman scales it is assumed that acceptable scales measure unidimensional traits and that deviations from perfect reproducibility are caused by some peculiarity of the situation. If the scale is self-administered, the disturbance can be charged almost wholly to the respondent. But if the scale is administered in the course of an interview, then the deviation from perfect reproducibility may be due also to the interviewer.

We explore here three questions concerning this type of interviewer effect:

- a. Are we justified in speaking of an interviewer effect of this kind?
- b. Does the performance of interviewers with different reproducibility coefficients differ in other respects?
- c. What are the implications for selection, training, and supervision of interviewers?

THE STUDY

The study on which these interviewer data are based was a survey of lower-class families in Puerto Rico. Its purpose was to find social psychological and family structure correlates of fertility control behavior. Fourteen interviewers (nine females and five males) participated in the study long enough to collect at least thirty interviews, each of which included four scales. The interviewers were trained in a three-week program which included description of the whole study, interviewing technique, and practice on the schedule. The schedules were edited on a current basis and recurrent errors were discussed with the interviewers.¹

The population interviewed was a rather homogeneous group, as it was intended to concentrate on those families which experience the greatest stress because of too large family size. This population was defined as

families with six or less years of education, married for five to twenty years and showing fertility as evidenced by at least one child. The survey was conducted in seven rural and two urban areas, designed to give a cross-section of the people of Puerto Rico. Each interviewer was assigned originally to one home station from which he was moved as the needs of the survey demanded. Eventually all worked in the urban areas where the interviewing had lagged most. Clearly, under those conditions no attempt was made to randomize assignments. But, partly because the respondents were so homogeneous, they turned out to be matched on most important demographic variables.

Thus, the median grade completed of the respondents of different interviewers clustered closely around three (2.6—3.2), and the median length of time married varied only from 11 to 14 years. The median age of women clustered between 29 and 34 years, of men between 38 and 41 years. Both members of a couple were interviewed. Because of the delicacy of the content of the interviews, interviewers and respondents were always of the same sex. This matching maked the distinction of sex influence of interviewer or respondent impossible, and hence no attempt at assessing this influence on the relations to be reported is made here.

The samples of the different interviewers varied considerably by residence; the percentage of rural respondents ranged from 32 to 86. As will be seen below, however, residence of the respondent had little effect on the variables under consideration.

The schedules included four sets of questions which were scalable by the Guttman technique. The high overall reproducibility coefficients may be taken as an indication that the scales do measure unidimensional traits.

The Prohibition Scale contained answers to the question concerning the number of

¹ A detailed discussion of the field procedures of the survey and especially the training program can be obtained from the authors.

activities which were prohibited to the wife. The list included such activities as wearing make-up or dancing with other men. Each of the questions was answered yes or no. The final scale included five questions with a reproducibility coefficient of .952 ($N=1204$).

The Communications with Spouse Scale included a list of topics (such as disciplining the children and birth control) about which it was asked whether the couple discussed them frequently, sometimes, or never. If they discussed the topic at all, the respondent was asked whether or not they usually agreed. The final scale included only the discussion part. Five items were dichotomized to give a scale with a reproducibility of .904 ($N=1207$).

The Communications with Friends Scale was similar to the previous one. The possible answers to the question about discussion were yes and no, while in the agreement part, indications of disagreements were followed with a question on whether respondent persisted in arguing out the disagreements. Four communication items yielded a reproducibility coefficient of .895 ($N=988$).

The Modesty Scale included a number of situations, such as undressing in front of the husband or telling the children about sex, with questions whether they embarrassed the respondent much, a little, or not at all (or with male respondents, whether they thought that their wives were embarrassed). By dichotomizing a six-item scale was constructed with a reproducibility of .896 ($N=1193$).

THE EFFECT OF THE INTERVIEWER ON REPRODUCIBILITY

The direct measure of the interviewer's influence is difficult because we do not know what the reproducibility would be in the absence of interviewing. But if reproducibility depends on the interviewer, then

he should get similar coefficients on different scales. The correlations give a measure of the consistency and thus of the interviewer effect. The rank order correlation are shown in Table 1.

The intercorrelations of three of the four scales are significant beyond the five per cent level. We are justified, therefore, to speak of an interviewer effect.

The prohibition scale alone seems different. A cue to this difference comes from the layout of the scale. It had only dichotomous questions, and the questions were asked in the order of their scale value. The pattern was thus quite obvious to the interviewer.

The other scales deviate from this simple form in either of two respects:

- a. The modesty and communications with spouse scales were originally trichotomous. The answers were in analysis grouped into dichotomies and the items rearranged to give a scale.
- b. The two communication scales were not asked continuously, but after each communication question, the respondent was asked about agreement on the issue.

These conditions favored the interviewer who tried to understand and keep in mind the purpose of the series of questions. In the prohibition scale following a mechanical pattern can lead to a highly reproducible scale. We may advance the hypothesis that the interviewer's ability in achieving consistency is, therefore, quite different under the two conditions. For the prohibition scale it will show mainly accuracy and compliance, while for the other scales understanding of the purpose of the study will be needed.

For the three scales, communication with spouse, communication with friends, and modesty, a combined score based on the average rank was constructed. This score (which will be called the "subtle scales"

TABLE 1. INTERCORRELATIONS OF INTERVIEWERS' REPRODUCIBILITY COEFFICIENTS FOR FOUR SCALES

	Prohibitions	Communication with Spouse	Communication with Friends	Modesty
Prohibitions	-.26	-.19	-.41
Communication with spouse		+.65	+.67
Communication with friends			+.53

$N=14$; significance levels: .05, rho=.53
.01, rho=.71

score) had a rank order correlation of $-.69$ with the prohibition scale score.

We have noted that the samples collected by the different interviewers differed by residence. The correlations in Table 1, therefore, may be accounted for by the respondent's residence; for instance, rural respondents may give more scales with perfect reproducibility. To check this possibility, the relationship between respondents residence and scale reproducibility was checked and chi square values for the four scales were obtained. They were (for one degree of freedom) .007 for communication between spouses, .64 for communication with friends, 1.95 for prohibitions, and 2.27 for modesty. None of them reach the 10 per cent level. However, as an additional check, reproducibility coefficients were computed separately for each interviewer's urban and rural interviews for the last two scales, and the rank orders correlated with each other. The coefficients were .55 for prohibitions and .46 for modesty.

Although the influence of each interviewer's sample cannot be completely excluded, we can state with confidence that the pattern of the correlations shown in Table 1 represents interviewer differences. Of course, the reproducibility coefficient is subject to many influences and its statistical properties have not been completely determined, and hence, correlations based on it cannot be taken at face value. The following sections show that in spite of the instability of the coefficient, the distinction which can be made between interviewers on its base is useful in understanding interviewer performance.

CHARACTERISTICS OF DIFFERENT TYPES OF INTERVIEWERS

Two measures of interviewer performance were developed in the course of the study. One, the editing score, consisted of the number in the first ten interviews of the errors and omissions which required editing. This is principally a measure of compliance with instructions. The second measure consists of the proportion of non-codable responses to the open-ended question: "Why did you first start to use birth control?" The answers were: "Did not want any more children," or "Had too many children."

These did not give any real information, since the intent of the question was mainly to distinguish between economic and health reasons. Here, then, is a measure of understanding the purpose of the survey. Naturally the interviewer with least editing errors and least non-codable responses was assigned top rank on the respective measures.

In addition to these measures the number of interviews collected was taken as a means of testing the effect of experience on performance. It cannot be interpreted as speed of interviewing, as not all interviewers worked for the whole period. Neither could the rate of obtaining interviews be used as a good criterion of performance, as most interviews were done on appointment and quantity was thus largely beyond the interviewer's control.

Table 2 shows the rank order correlations

TABLE 2. INTERVIEWERS' SCALE REPRODUCIBILITY AND OTHER MEASURES

Reproducibility on	Editing Score	Codability of Open-ended Question	N of Interviews Collected
Prohibition scale	+.60	+.24	+.50
Subtle scales	-.06	+.60	-.55

N=14; significance level .05, rho=.53
.01, rho=.71

of these measures with the interviewers scale reproducibility.

The correlations bear out the interpretation of reproducibility in the two types of scales as measures of compliance and understanding respectively. Reproducibility of the prohibition scale relates to the editing score, but not significantly to the performance on the open-ended question. The latter, which shows understanding of the intent of the question, is related to the reproducibility of the subtle scales.

The effect of quantity of interviews, of experience, reinforces this view. The more interviews the interviewer collects, the better his routine performance. His understanding, however, suffers with the repetitious work. It is likely, moreover, that the routine interviewer is more quantity-minded and thus the relationships are reinforced. Under the conditions of this study the two relations could not be differentiated.

IMPLICATIONS FOR INTERVIEWER SELECTION, TRAINING, AND SUPERVISION

We have pointed up two different sets of interviewer traits, those connected with conscientiously completing the questionnaire and those derived from understanding of the study. The first set was associated with high reproducibility on scales with obvious patterns, the second with high reproducibility on subtle scales.

As the two traits were found to be negatively correlated, it is likely that few interviewers will excel in both abilities. Which ability is preferable, if a choice must be made, will depend on the kind of interviewing job required. In surveys where all questions are pre-coded, where the interviewer has to follow exactly all instructions, one type will be superior. In qualitative studies, where each interviewer has a relatively small number of interviews and uses primarily open-ended questions, the second type would be preferred. It is important to realize that the same interviewer will not do well in all survey jobs.

A determined effort should be made to help the interviewers who are weak in either of the areas. This is especially true of the interviewer who has difficulties in understanding the purpose of the study. The necessity of completing the questionnaire ac-

cording to instructions is usually stressed sufficiently in training, while the instruction on the background of the study may be neglected. In this study it was noted the interviewers were eager to learn more about the background of the study, although close to two days were devoted to this topic. There was a tendency in the post-training evaluation questionnaire for the interviewers who turned out high on the subtle scales to demand more background information, while the interviewers who were high on the prohibition scale wanted more instruction on the interviewing and completing the questionnaire. That is, both groups asked for more training in the field in which they were already good. This difference between the two groups, although small, emphasizes the necessity of creating interest in those topics to which the trainee would be not drawn by himself.

Similarly, during the supervision of the interview in the field, conscientious completion of the questionnaires is likely to receive the principal attention. It is easier to devise checks and to set standards for following the explicit instructions than to keep a continuous check on the understanding of the interviews. It is hoped, therefore, that the type of measures discussed here can be developed as aids in field supervision.

IS CHILDLESSNESS RELATED TO FAMILY STABILITY?

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ASOUND social and psychological upbringing of children is predicated upon a wholesome family relationship. The impact of divorce upon children, therefore, has always been a matter of great concern, for it is generally agreed that the overall effect of divorce is detrimental to them. On the other hand, the deprivations and emotional harm to children who live with parents unmindful of their responsibilities or continually in conflict with one another is no less important a matter. From this point of view it is deemed fortunate that so many divorcés are without children; and it has been suggested that, from the child's standpoint, it might be better if some of the

families in constant discord were socially dissolved.¹

Not much of a statistical nature is known about the children of divorced or separated families: their ages, their social origins, their educational and occupational attainments,

¹ J. P. Lichtenberger, *Divorce, A Social Interpretation*, New York: McGraw-Hill Book Co., 1931, p. 140; Earl L. Koos, *Marriage*, New York: Henry Holt and Co., 1953, pp. 351-352; John Sirjamaki, *The American Family in the Twentieth Century*, Cambridge: Harvard University Press, 1953, pp. 120-121; J. Louise Despert, *Children of Divorce*, Garden City, New York: Doubleday and Co., 1953, pp. 9-25; L. V. Harrison, *A New Pattern for Family Justice*, New York: Community Service Society of New York, 1954, pp. 5-6, 23, 41.

and so forth.² Having no national statistics in the United States on divorce or separation, we can only estimate their total number. Secondary information, however, supports the position that children of socially broken families experience unique difficulties and show the bad effects of marital discord. We find these children involved in court disputes over legal custody, and we find them heavily represented among families on public relief, in delinquency cases, in types of nervous disorders, and in other problem areas.

There are some who contend (principally on logical grounds) that children themselves are a factor in precipitating divorce or desertion, in that they may create (especially in numbers) an emotional, social and economic strain on the parents, or they may be merely another point of disagreement between them. Much more often, however, children are considered to be a deterrent to divorce, and having children is thought to be a form of insurance against family disintegration.³

There is a widespread and persistent belief that children make for greater marital happiness, yet research studies of the relationship between *marital adjustment* and childlessness are at odds with one another.⁴

²This does not refer to children in Census-classified "divorced" families—who do not represent all children of divorced parents.

³Cf., E. R. Groves and W. F. Ogburn, *American Marriage and Family Relationships*, New York: Henry Holt and Co., 1928, p. 352; E. R. Mowrer, "The Trend and Ecology of Family Disintegration in Chicago," *American Sociological Review*, 3 (June, 1938), p. 348; M. A. Elliott and F. E. Merrill, *Social Disorganization*, New York: Harper and Brothers, 1950 edition, p. 443; E. Slater and M. Woodside, *Patterns of Marriage*, London: Cassell and Co., Ltd., 1951, pp. 141-142; Despert, *op. cit.*, p. 22; and H. Whitman's syndicated articles on divorce, particularly "Children Are Real Losers in Divorce Cases," *Philadelphia Evening Bulletin*, July 4, 1954.

⁴E. R. Mowrer, *Disorganization, Personal and Social*, Philadelphia: J. B. Lippincott, 1942, p. 492. For a review of these studies see H. J. Locke, *Predicting Adjustment in Marriage*, New York: Henry Holt and Co., 1951, pp. 158 ff., 338 and 344; H. T. Christensen and R. E. Philbrick, "Family Size as a Factor in Marital Adjustment of College Couples," *American Sociological Review*, 17 (June, 1952), pp. 306-307; E. W. Burgess and P. Wallin, *Engagement and Marriage*, Philadelphia: J. B. Lippincott, 1953, pp. 698-720. See also P. Popenoe, *Modern Marriage*, New York: Macmillan Co., 1943, p. 268.

A number of them have shown no relationship to exist, and one of them in particular found an increase in maladjustment as the size of the family increased. It should be fully recognized that all these various studies have different contexts and are not strictly referable to one another or to the entire population.

Nevertheless, "statistics appear to show that childless marriages are more likely to end in divorce."⁵ It is this supposed fact which has long been the keystone of nearly all theories and interpretations which claim a causal relationship between childlessness and divorce.

PRIOR STUDIES

In analyzing the statistics of divorce for the period 1867-1886, Walter Willcox compared the percentage of childless divorcés (in selected states) with the percentage of ever-married women in Massachusetts in 1885 who had not borne children. He concluded that childless marriages are "between three and four times as likely to end in divorce as marriages with children."⁶ Some forty years afterwards Alfred Cahen used a marriage "sterility" percentage (which, oddly enough, was almost the same as the dissimilar Massachusetts figure) to obtain a like result, which Cahen interpreted to show "that 71 per cent of the childless marriages in America end in divorce, while only 8 per cent of the married couples with children eventually are divorced."⁷ Willcox and Cahen did not refine their calculations in any way, nor did they offer any qualifications to their conclusions.

When Marshall and May made their intensive analyses of divorce records in Maryland and Ohio in 1930, they carefully examined the alleged relationship of children to divorce and produced several new facets of information on the subject. This part of

⁵Burgess and Wallin, *op. cit.*, p. 720. W. F. Willcox, *Studies in American Demography*, Ithaca: Cornell University Press, 1940, states on page 354, "The presence of children in a family doubtless reduces the risk of divorce."

⁶W. F. Willcox, *The Divorce Problem*, New York: Columbia University Studies in History, Economics and Public Law, Vol. 1, No. 1, 1891, pp. 33-34; *op. cit.*, p. 354.

⁷A. Cahen, *Statistical Analysis of American Divorce*, New York: Columbia University Press, 1932, p. 113.

their work was not sufficiently definitive, but it did cast doubt upon the validity of the thesis that an undue proportion of childless marriages are found in the divorce courts, for they clearly pointed to the fact that divorces concentrate in the early years of marriage and hence childlessness might be a simple consequence of their shorter duration.⁸ Hemperley in his study of Minneapolis divorces also called attention to the prime need for a "control" group, and Mowrer in his studies cautioned about the biasing effect of unequal marriage durations in making comparisons between divorces and the general population.⁹

A recent study, following upon Marshall and May's suggestion, utilized some new population data for comparison and sought to resolve the question by controlling marriage duration.¹⁰ As might have been ex-

pected, the previous overemphasis was greatly modified, but (in spite of some verbal qualifications) this widely quoted study did not change the original premise: that childless families account for a *relatively* large part of all divorces.

DATA AND METHODOLOGY

This paper will offer a demonstration of the need for more refined statistical methodology and data in studies of children and marital stability. What the public wants to know, and what we all assume divorce studies to show, is whether couples who are divorced are more often childless (and have fewer children) than *comparable* couples who are not divorced. Most especially, we are interested in first marriages. The new data here assembled partially answer such a question.

"Children"—Divorce Statistics. The unit of study seems never to have been carefully defined. Federal statistics were gathered to show (1) "the number of children by the marriage" (1867-1886), (2) "the number of children," presumably in the family (1887-1906), (3) "the number of children affected by the decree" (1916 and 1922-1924), and (4) "the number of minor children affected by the decree" (1925-1932). The second investigation for 1887-1906 found that "satisfactory data concerning the number of children by the marriage could not be obtained," and the statistics of both periods were assumed to relate to "those affected by the decree . . . which approximates the number of dependent (sic) children."¹¹ The phrasing of the query did not actually include "affected" until the 1916 collection was made; and, except as explanation, the word "dependent" was never used. It was not until 1925 that the age qualification "minor" was inserted, with the assumption, however, that it was "substantially the same inquiry . . . (and the statistics) at each of the investigations relate only to minor children affected by the

⁸ L. C. Marshall and G. May, *The Divorce Court, Maryland*, Baltimore: The Johns Hopkins Press, 1932, pp. 32, 34, 60-90; and, *The Divorce Court, Ohio*, Baltimore: the Johns Hopkins Press, 1933, pp. 94-118.

⁹ G. P. Hemperley, *Divorce Records Study, Hennepin County, Minneapolis, Minnesota, 1858-1940*, Minneapolis: W.P.A. Project, 1940, p. 158; E. R. Mowrer, *The Family*, Chicago: University of Chicago Press, 1932, p. 156; *op cit.*, June 1938, p. 348; *Family Disorganization*, Chicago: University of Chicago Press, 1939, pp. 73, 102; and, *op. cit.*, 1942, p. 492. Some of the studies cited in this paper, it should be noted, include actions filed as well as those granted, annulments, separate maintenance actions, child custody suits, and others.

¹⁰ P. H. Jacobson, "Differences in Divorce by Duration of Marriage and Size of Family," *American Sociological Review*, 15 (April, 1950), pp. 235-244; Metropolitan Life Insurance Co., "Divorce and Size of Family," *Statistical Bulletin*, 31 (February, 1950), pp. 1-3; and L. I. Dublin and M. Spiegelman, *The Facts of Life from Birth to Death*, New York: Macmillan Co., 1951, pp. 71-72. The writer sought but could not obtain from Dr. Jacobson a complete description of his methodology or his basic figures (none are given in the article). One finds in the article unsubstantiated statements and a number of hidden assumptions. For instance, (1) information on the total population of the United States was compared to divorce data regarding children from slightly more than one-third of the states, with no indication of comparability or the lack of it; (2) adjustment of divorce data for some states is gingerly made to an 18 year old level (on the basis of Marshall and May's 1930 data for Ohio and Maryland), and the final composite of "children" in the divorce data is then compared with great statistical faith to the 1948 Census data for the United States; and (3) the population survey data on married couples was

given for durations "Under 1 year, 1 year, 2 to 4 years, 5 to 9 years, 10 to 14 years, and 15 years and over"—whereas the author gives graphic presentation of rates calculated for *single years* of duration up to 40 years.

¹¹ Bureau of the Census, *Marriage and Divorce, 1867-1906*, Washington, D. C.: Government Printing Office, 1909, Pt. I, pp. 40-41.

decrees."¹² Thus, in spite of the changing types of questions, there is assumed to be no significant alteration in the results. Furthermore, although the percentage not reporting as to children was over 40 per cent in 1867-1886, 20 per cent in 1887-1906, 10 per cent in 1916, and less than 10 per cent since 1922, in usage those divorces not reported as to children have been counted as having no children "affected by the decree."

The divorce form in Wisconsin has been changed several times in the last twenty years and has shown (1a) "Number of children by the marriage," (1b) "Number of children by this marriage," (2a) "Number of children affected by the decree," (2b) "Number of children affected by the decree, under 18 years and living at home," (3a) "Total number of children of wife," and (3b) "Number of children, total in family." In the published statistics and studies made of Wisconsin it is almost impossible to ascertain which type of "children" was compiled. Children by the wife would exclude in remarriages the husband's children by a first marriage; children by this marriage would exclude all stepchildren; children under 18 years would be fewer than "total in family"; and so on. Wisconsin merely gives illustration to the point that statistical clarity is often wanting even in the practices of the same state from time to time.

As between states the divergence is even more apparent because we find the terms "dependent," "affected by the decree," and "minor" used without definition, in addition to "under 18," "under 21," "minor as interpreted by the courts," or simply "number of children."¹³ A "child" has several definitions in the law, and state officials often have no knowledge of what is actually reported.

One can only wonder what consistency would appear at the county levels where the clerks record the information. Another aspect not often made clear in published data and private research studies is whether the units of measurement might be "living children" (of all ages or living at home) or "children ever born" (including live-born children some of whom are deceased).

Marshall and May discussed this matter at some length and expressed the view that self-supporting and married children, deceased children, children no longer in the household, and adult children are probably omitted in court reports, insofar as the divorce may not "affect" them.¹⁴ Stepchildren may also be omitted to some degree for the same reason. In general there is much reason to believe that "children" are underreported in regular statistical returns.

Some statistics for Chicago in 1914-1915 confirm Marshall and May's belief.¹⁵ Perhaps the girls were all married or considered "emancipated" legally at the age of 18, since Table 1 shows no female "minor child-

TABLE 1. NUMBER OF MINOR CHILDREN BY AGE GROUP, CHICAGO DIVORCES, 1914-1915

Age Group	Per Cent Distribution		
	Total (4,229)	Boys (2,281)	Girls (1,948)
Total	100.0	100.0	100.0
1-3	19.4	18.5	20.4
4-6	23.9	24.2	23.5
7-9	21.1	19.8	22.5
10-13	19.1	17.9	20.6
14-17	13.2	13.4	13.0
18-20	3.3	6.2	...

ren" over this age. There were also half as many boys in the age group 18-20 (three years) compared to the age group 14-17 (four years). Analysis of several other studies which show ages of children involved in divorces points to the same possibility that older children are "missed" or left out of divorce records, perhaps since they are not "affected" or "dependent" economically.

¹² Bureau of the Census, *Marriage and Divorce Report for 1925*, Washington D. C.: Government Printing Office, 1926, p. 36.

¹³ From an examination of original divorce forms in use in various states. See also, National Office of Vital Statistics, *Vital Statistics—Special Reports*, Vol. 37, No. 4, December 9, 1952, p. 73; and Jacobson, *op. cit.*, fn. 1 and 18, and p. 236. In 1953 three precise questions placed on the divorce forms in Iowa brought to light a number of inconsistencies regarding the kinds of "children" reported; see, Iowa State Department of Health, Des Moines, Iowa: 1953, *Marriage and Divorce in Iowa*, excerpted from the Annual Report of the Division of Vital Statistics, pp. 2-3, and 215.

¹⁴ Marshall and May, *op. cit.*, Maryland, pp. 66-67, 71, 78-82; Ohio, pp. 101, 103.

¹⁵ Bureau of Social Service, Cook County, Illinois, *Marriage and Divorce, An Analysis of Cook County Statistics for the Years 1914 and 1915*, Chicago: Bureau of Social Service, Publication No. 1, 1916, pp. 5-6.

Marshall and May found 3.1 per cent of all families in their 1929 Maryland study had adult children, and 1.4 per cent more had deceased children only. In New Jersey in 1948-49, 2.5 per cent of all families (in all types of matrimonial cases) had children aged 18-20, and 5.3 per cent additional families had children over age 21 only.¹⁶

It would seem from the above that our information on children in divorce should follow upon, as it has not, a careful definition of what is to be enumerated.

"Children"—Population Data. The number of children in families being divorced is

single persons as well as other types of household heads, and just prior to 1950 the Census definition of a family was changed. Viewing husband-wife families we find that the per cent with no children becomes smaller than the total figure indicates. However, if we further select Census families to refer to "own" children under 18 years of age, we find a relatively higher percentage of this type of husband-wife family with no children in the home, amounting to about 45 per cent in 1950.¹⁷

Remarriages—Divorce Data. There is good statistical evidence to suggest that re-

TABLE 2. PER CENT OF "FAMILIES" WITH NO CHILDREN
UNITED STATES

	1910	1930	1940	1950
Children ever-born to women ever-married:				
Ages 15-74	13.6		20.3	
Ages 45-49	9.5		15.4	
Related children under 21 years				
All families		38.9	44.3	
Married head, wife present		31.9	36.4	
Related children under 18 years				
All families			48.9*	50.1*
Married head, wife present			40.9*	42.2*
Own children under 18 years				
All families				48.3
Married head, wife present				45.3
All married couples†				45.5

* These comparable figures refer to "households."

† Including Census subfamilies.

usually juxtaposed with population data. As evidenced in Table 2 a great deal depends upon what "population" is chosen for comparison.

It is manifestly inept to use "children ever-born to women ever-married," such as Cahen and Willcox have done in divorce comparisons, because the two populations are not similarly constituted in that divorce statistics do not include all "ever born" children. Total Census "families" include

married persons are more prone to divorce.¹⁸ This creates a distortion in the underlying pattern of divorce. As for the measurement of the divorce rate, Willcox was careful to

¹⁶ Marshall and May, *op. cit.*, Maryland, p. 69; A. T. Vanderbilt, Chrm., *Report of the Committee on Custody and Divorce*, Trenton: Supreme Court of New Jersey, mimeographed, 1949, Appendix B, pp. 6-10. Another study of selected Pennsylvania counties in 1923-1924 found that 15 per cent of all children of couples being divorced (and having children) were over the age of 18. See U. S. Department of Labor, *Child Welfare Conditions and Resources in Seven Pennsylvania Counties*, Children's Bureau Publication No. 176, Washington, D. C.: Government Printing Office, 1927, p. 259.

¹⁷ Bureau of the Census publications: *Population, Differential Fertility 1940 and 1910*, *Fertility for States and Large Cities*, Washington, D. C.: Government Printing Office, 1943, pp. 7, 10; "Types of Families in the United States," (News release, dated August 5, 1935), p. 2; *Population—Special Reports Series P-44*, No. 7, and PH-4, No. 1, p. 3; and *Current Population Reports*, Series P-20, No. 33, pp. 15, 16, 18. See also Census publications *Population (1940) Families: Types of Families*, and *Population (1940) Size of Family and Age of Head*, Washington, D. C.: Government Printing Office, 1943 and 1944. It should be noted that the Census husband-wife families do not include a variable number of married couples shown separately as "subfamilies," and that the Census's "own" children include stepchildren as well as adopted children by either party.

¹⁸ T. P. Monahan, "How Stable Are Remarriages?" *American Journal of Sociology*, 58 (November, 1952), pp. 280-288.

point this out, but neither he nor any other writer has given it attention in their studies of children in divorce. We thus have a spurious overemphasis of childlessness in divorce. Widowed persons who remarry may have children, but when remarried widowed persons are divorced, their children may not be counted as of "this marriage," or they may have passed the age of 18 (or 21) years, or are not "affected" or "dependent." Remarried divorced persons may have had no children in the first place, and divorcing soon again, they are not likely to have children by the remarriage either. Hence, if both types contribute inordinately to divorce, they will accentuate the apparent childlessness of divorced couples.

TABLE 3. PER CENT OF FAMILIES WITH STEP-
CHILDREN,* CINCINNATI, 1923

All problem families	13
Divorce	21
Desertion	10
Delinquency	15
Mother's aid	2
Dependency and neglect	20

* Including only families with children or pregnant wives.

A 1923 study of Cincinnati (Hamilton County), Ohio, records revealed that a relatively large proportion of divorcing families had stepchildren, in comparison to other "problem" families.¹⁹ A Philadelphia study (discussed below) revealed that of the re-

¹⁹ U. S. Department of Labor, *The Child, The Family and The Court*, Washington, D. C.: Government Printing Office, 1933, Bureau Publication No. 193 revised, p. 87.

married couples who became divorced in the period 1937-1950 only 13 per cent had children by the present marriage and 75 per cent of all children (all ages) were step-children.

The records of a few statistically minded states have prior marital status on their divorce reporting forms. *Primary marriages* (both parties married once only) show a much higher proportion with children than the total which includes remarriages, as shown in Table 4.²⁰

Remarriages—Population Data. The items enumerated in the 1950 Census enabled the compilation of much useful information on marriage and the family. Unfortunately, the plans were scrapped for political reasons of economy, and very little of the data will probably be tabulated and published. We, therefore, have no recent information to compare with the divorce data for Iowa and Georgia. However, the United States population survey of 1948 gave the findings in Table 5.²¹

Again, we see in these population data a result similar to that for divorces according to remarriage. The modification is in the same direction, so that we can only conjecture what the net result might be for a dual

²⁰ A special tabulation of divorces in Georgia was kindly prepared for the writer by Mr. L. M. Lacy, Director of Vital Statistics, and Mr. H. B. Wells, Statistical Supervisor. A new series of tables on children in divorce according to previous marital status was started in 1951 in Iowa; see Iowa State Department of Health, Des Moines, Iowa, *Annual Report of the Division of Vital Statistics for 1951, and 1952*.

²¹ Bureau of the Census, *Current Population Reports, Series P-20*, No. 21 and No. 23.

TABLE 4. PER CENT DISTRIBUTION OF DIVORCES BY NUMBER OF CHILDREN FOR TOTAL AND PRIMARY MARRIAGES *

Number of Children	Iowa Divorces, 1951-1952 Number of Minor Children Affected by the Decree			Georgia Divorces, July-December 1952 Number of Children Under 18 Years Affected by the Decree			
	Total	Primary Marriages	Remainder	Total	Primary Marriages	Remarried	Remainder
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0	50.0	36.5	65.8	56.7	47.0	69.9	66.7
1	23.7	28.6	18.0	22.7	26.8	17.5	17.0
2	15.1	19.7	9.7	12.7	16.3	7.7	9.9
3	6.4	8.6	3.9	5.1	6.4	2.9	5.7
4	2.9	4.0	1.5	1.8	2.3	1.2	.7
5 and over	1.9	2.6	1.1	1.0	1.2	.8	...

* Georgia data include annulments (0.6 per cent). Iowa data exclude annulments and separate maintenance decrees, the inclusion of which does not alter the results.

TABLE 5. PER CENT OF EVER MARRIED PERSONS 14 YEARS OF AGE AND OVER AND FAMILIES WITH NO "OWN" CHILDREN UNDER 18 YEARS OF AGE
UNITED STATES, 1948

Ever Married:	Males	Females
All ever married	50.6	52.9
Married once (spouse present)	43.5	43.0
Remarried (spouse present)	57.2	59.8
Families		
All families	48.3	
All married couples	45.2	
Husband-wife families	44.8	
Once-married husbands	42.9	
Remarried husbands	57.0	

refinement of this kind, which would enable us to compare divorces with the general population.

Duration of Marriage. Independently of the above refinements, we still do not know whether primary marriages ending in divorce would show more or fewer children than do stable primary marriages of the same duration. In other words, childlessness (and fewer children) could still be a consequence of shorter duration of marriages ending in divorce. Marshall and May gave strong caution on this point, and they presented some data bearing upon it. Jacobson compared his miscellaneous sample of divorces with the U. S. population data for 1948, and produced divorce rates for couples with and for couples without children according to each year of duration of marriage up to 40 years. He did not make any allowance for remarriages in his result. Furthermore, since procreation logically stops when the married couple separates, the time of separation (at least) should be the focal point of comparison. Jacobson acknowledges that the use of separation dates would alter his results, but he seriously underestimated the interval between separation and divorce as being "about one year."²² Moreover, his detailed chart has been accepted almost without qualification by users of his study.

Population Data on Children by Duration of Marriage. Before turning to the matter of separation date, it might be helpful to illustrate from the 1948 Census survey how re-

²² Jacobson, *op. cit.*, p. 244. See, for instance, Mowrer, *op. cit.*, 1938, p. 345, and Mowrer, *op. cit.*, 1939, pp. 305, 307, 310; and W. Kephart, "Duration of Marriage," *American Sociological Review*, 19 (June, 1954), pp. 289 ff.

finement for remarriage and duration could alter the form of comparison.²³

The greater proportion of remarriages with "own" children in the family in the first year of marriage undoubtedly signifies stepchildren. The increase in "families" with no "own" children under 18 years in the upper durations is also a fictitious result since children born of the marriage have often passed age 18 for these long enduring marriages.

Philadelphia Divorces—Children by Duration of Marriage. Using data compiled by Kephart, a special tabulation was made regarding children according to the dates of separation and divorce. Prior to the decree a "master's hearing" is held by a court-appointed lawyer to ascertain the facts and gather testimony. To determine the age of each child in the family at the time of separation, the interval between the date of separation and the date of the master's hearing in completed years was subtracted from the ages given for the children at the hearing. This procedure was not precise in individual cases, but the errors are self-compensating ones.²⁴

Using the separation date increases the number of families with children under 18 years of age from 43.5 to 51.4 per cent, and those with children under 21 years from 47.0 to 52.6 per cent. In other words the interval from separation to master's hearing (divorces occur shortly afterwards in Philadelphia) causes a misleading increase in childlessness (i.e., no children under 18 years, or 21 years). By the time the divorces were heard, 5.6 per cent of all families who had children under 21 years at the time of their separation did not have any "minor" children at the later date.

A select group of native white primary marriages, somewhat differently arranged in Table 8, shows essentially the same result. Whereas only 5 per cent of the families lasting one year or less at the date of "divorce"

²³ See fn. 21. Jacobson does not indicate which of the two sets of data he used (without refinement for remarriage). "Married once" in these data does not mean both parties were married once only.

²⁴ For a description of the Philadelphia study, see W. M. Kephart and T. P. Monahan, "Desertion and Divorce in Philadelphia," *American Sociological Review*, 17 (December, 1952), pp. 719-727.

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TABLE 6. PER CENT OF MARRIED PERSONS 14 YEARS OF AGE AND OVER (SPOUSE PRESENT), AND PER CENT OF HUSBAND-WIFE CENSUS FAMILIES WITH NO "OWN" CHILDREN UNDER 18 YEARS OF AGE
UNITED STATES, 1948

Duration of Marriage	Married Persons, Spouse Present							
	Total		Married Once		Remarried		Males	Females
	Males	Females	Males	Females	Males	Females		
Total	45.3	45.1	43.5	43.0	57.2	59.8		
Under 1 year	86.7	86.5	90.8	94.1	74.5	63.5		
1 year	56.3	56.0	56.2	57.9	56.9	48.2		
2-4 years	37.9	38.0	34.4	34.1	52.0	51.2		
5-9 years	23.2	22.9	18.5	18.2	48.8	49.7		
10 years and over	50.1	50.0	48.9	48.0	60.8	70.7		
Husband-Wife Census Families								
	Total		Husband Married Once Only		Husband Married More Than Once			
Total	44.8		42.9		57.0			
Under 1 year	85.1		85.5		74.0			
1 year	56.6		56.5		56.8			
2-4 years	37.6		33.4		52.9			
5-9 years	22.7		17.6		48.2			
10-14 years	21.0		16.6		46.6			
15 years and over	58.2		57.4		67.1			

had children under 18 years of age, the figure for those who had children under 18 years at the time of separation (marriage duration one year or less) was 24 per cent.

Perhaps the most remarkable figure in Table 8 is the one showing that 24 out of 26 families lasting 30 years or more (at divorce), or 92 per cent, had living children. It is also notable that of 67 families lasting 15 to 19 years (at separation) 87 per cent had children under 18 years of age. Certainly this compares well with general population data.

However one considers it, there is sufficient evidence in these tables to indicate that childlessness is neither so important nor sig-

nificant a characteristic of divorces as has been supposed. Whether or not divorcés have fewer children is also a moot question.²⁵

Other data in various degrees of refinement (excepting for separation date) have been assembled by the writer for special areas. This information greatly minimizes the frequently cited differences between stable families and divorced families as to children. Lacking complete refinement and truly comparable population data, these results are worth mentioning only as a confirmation of the above conclusion.

²⁵ Even in recent years families with 15 and 16 children (now rare) have obtained divorces.

TABLE 7. PER CENT OF FAMILIES WITH CHILDREN IN STATED AGE GROUPS,
PHILADELPHIA DIVORCES (PRIMARY MARRIAGES ONLY), 1937-1950 *

	Divorce Date					Separation Date				
	No Children	Children Under 16	Other Children in Ages			No Children	Children Under 16	Other Children in Ages		
			16-17	18-20	21 and Over			16-17	18-20	21 and Over
Total	44.8	40.0	3.5	3.5	8.2	44.8	49.9	1.5	1.2	2.6
White	43.7	40.9	3.7	3.9	7.8	43.8	50.7	1.5	1.2	2.8
Native born	44.2	42.3	3.2	3.6	6.7	44.3	50.9	1.7	1.1	2.0
Foreign born	41.2	33.1	6.3	5.1	14.3	41.2	49.7	.6	1.7	6.8
Nonwhite	52.8	33.3	2.1	.7	11.1	53.1	43.4	1.4	1.4	.7

* Classified as nonwhite if either party was nonwhite; foreign born, if either party was of foreign birth. Percentages rounded to add to 100.

DESERTION AND CHILDREN

The true relationship between marital stability and childlessness, it is said, should take into account family desertions, non-support, and informal separations.²⁶ A high proportion of children have always been found in non-support and desertion cases, whether recorded as court actions or as applications at private and public relief agencies. One such private agency reported that 96 per cent of the deserted families to which they gave service had children.²⁷ Court cases

the number of wives without children accepted by different courts depends upon local judicial policy.

*Philadelphia Municipal Court Data.*²⁸ In the early years of the court's history the Face Sheet called for a considerable amount of social information, and the early statistics show various kinds of "children": "children born," "children living at home," and "living children," as well as "children under 16" and "under 21"—causing some inconsistencies and noncomparabilities in the results,

TABLE 8. PER CENT OF FAMILIES WITH NO CHILDREN UNDER SPECIFIED AGES ACCORDING TO
SEPARATION DATE OR DIVORCE DATE, NATIVE WHITE COUPLES,
PRIMARY MARRIAGES ONLY, PHILADELPHIA

Duration in Years	Divorces, 1937-1950				Desertions, 1950*	
	No. Children Under 18	At Divorce Date		At Separation Date No. Children Under 18		
		No. Children Under 21	No. Children All Ages			
Under 1	100.0			85.4	63.5	
1	93.8			61.9	29.6	
2	71.4			55.6	11.8	
3	80.0			51.4	9.4	
4	64.1			43.5	9.8	
5	67.9			37.9	4.1	
6	57.8			31.7	6.9	
7	38.3			19.6		
8	39.6			23.5		
9	35.1			21.4		
10-14	37.1	37.1		34.2	8.3	
15-19	31.5	25.2	25.2	13.4	14.3	
20-24	62.0	35.4	19.0			
25-29	88.1	73.8	11.9	66.0	44.6	
30 and over	92.3	92.3	7.7			

* Excluding wives divorced at application. Duration as of separation date, children as of date of application at court for non-support.

show a much higher number of families with no children, in the order of 25 to 30 per cent, since the wife may start action for herself alone.²⁸ This figure varies because

²⁶ Burgess and Wallin, *op. cit.*, p. 720; K. Davis, "Children of Divorced Parents, Sociological and Statistical Analysis," *Law and Contemporary Problems*, 10 (Summer, 1944), p. 713.

²⁷ L. Brandt, *Five Hundred and Seventy-Four Deserters and Their Families*, New York: The Charity Organization Society, 1905, p. 16.

²⁸ See statistics of various domestic relations courts; also, Mowrer, *op. cit.*; Marshall and May, *op. cit.*, Maryland, pp. 35, 50, 74, 80; H. Flinn and A. Jacoby, "One Hundred Domestic Relations Problems," *Mental Hygiene*, X (October, 1926), p. 736; D. O'Reurke, "Fifty Family Deserters, An Inquiry Into the Reasons for Desertion," *Smith College Studies in Social Work*, 1 (June, 1931), pp. 385-386; Rev. J. L. Thomas, "Some Factors

further illustrating the need for better definition.

Desertion cases, unlike divorce cases, usually make court application *very soon after separation* due to economic urgency. They are also a younger population, and nonwhites are much overrepresented in desertions. If we control population data for age and color, the number of husband-wife families with no children under 16 years of age in 1934-1935 would have been about 39 per cent in Philadelphia, in contrast to which

Involved in the Breakdown of Catholic Marriage," (unpublished doctoral dissertation, University of Chicago, 1949).

²⁹ Philadelphia Municipal Court, *Annual Reports*, 1915 to 1918, 1922 and 1923, 1941 to 1948, and 1950.

about one-fourth to one-third of all desertion families were without children. Primary marriages show more families with children than do the various remarriage classes, and whites more often have children than non-whites. The average number of children in native white families having children (primary marriages) was similar for the Philadelphia divorce sample and the 1950 desertions, but, as suggested in Table 8, for comparable durations the desertion group more often had children in the family.

Table 9 is presented merely as a sugges-

TABLE 9. WHITE FAMILIES (HUSBAND, WIFE PRESENT) WITH NO CHILDREN UNDER THE AGES SHOWN
PHILADELPHIA *

	Population Data		
	Under 16	Under 18	Under 21
1934-36	48.9	...	...
1940	...	44.0	[39.6 Whites and nonwhites]
Divorce Data			
1937-50			
Divorce date	59.1	55.4	51.5
Separation date	49.3	47.8	46.6
Desertion Data			
1950	21.5†		

* The divorce and desertion data refer to primary marriages, both parties married once only.

† Excluding cases divorced at application, nearly all of whom had children.

tion of the general relationship, without any intention of implying exact comparability.³⁰

Interestingly enough, in total cases, stepchildren (not eligible for support) inflate the number of children in desertion families. In 1922-1923, 16 to 17 per cent of all children in Philadelphia desertion and non-support cases were stepchildren; in 1950 the figure was 15 per cent. On a family basis about 5 per cent of all families had stepchildren only, and an additional 5 per cent

³⁰ See fn. 17; and United States Social Security Board, *Statistics of Family Composition in Selected Areas of the United States, 1934-36*, Vol. 6, Philadelphia, Bureau Memorandum No. 45, February, 1942. A similar situation was found for Chicago, using Mowrer's published data.

had stepchildren and own children of this marriage.³¹

Social workers in family agencies have frequently called attention to the psychological inability of some deserting husbands to adjust to crises of pregnancy or childbirth and to the attempts of other husbands to escape from the economic burden and responsibilities of growing families. Such writers probably did not fully realize the way their agencies "selected" parent-child families for treatment, and hence one must discount such assertions as "children are the main factor in the problem of deserted families."³² Court records of deserted families support the position, however, that many married persons (women as well as men) may attempt to flee their parental duty, and, if not deserting, fail to support their family when pleasures intervene.

CONCLUSION

A more complete answer to the question of the relationship between marital instability and children must await the compilation of more refined data on divorce, desertion, and domestic discord, and the characteristics of stable families in the population as a whole. In any sound analysis attention should be given to the following: a clear definition of "children" and other units of comparison; an analysis of data according to marital status types; and a concern with separation dates—the true marriage duration (not being able to account for the time period wherein marital relations may completely cease prior to actual separation).³³

³¹ The Census includes children of either the husband or the wife jointly under "husband's own children" and "wife's own children," a clearly ambiguous procedure.

³² Zilpha Smith, *Deserted Wives and Deserting Husbands: A Study of Two Hundred and Thirty-Four Families*, Boston: The Associated Charities of Boston, 1901, p. 9. See also Brandt, *op. cit.*, p. 23; Mowrer, *op. cit.*, 1932, p. 156; 1938, p. 348; and 1942, p. 492; E. R. Mowrer and H. R. Mowrer, *Domestic Discord*, Chicago; University of Chicago Press, 1928, p. 126; H. R. Mowrer, in *Family, Marriage and Parenthood*, ed. H. Becker and R. Hill, Boston: D. C. Heath and Co., 1948, p. 366.

³³ In 1952 the writer proposed that an age level be specified for the item on "children" in the new standard divorce form (accepted by the Public Health Conference on Records and Statistics in 1954), with a further recommendation

Racial, rural, occupational and other refinements should not be ignored in any comprehensive study either.

The statistical evidence produced in this article should serve to show that the alleged association between *divorce* and childlessness has been a statistically spurious one and may not exist at all. The marital adjustment

that ample definition be carried in the stub of the record to indicate fully what is meant by "number of children under 18." The writer's arguments for the inclusion of an item on date of separation got no support, and this important query was not adopted for the standard form. The United States divorce collections in former years included items on both separation date and marriage duration. No cross-tabulations respecting children were made, however. In 1922 the item on separation, having rarely been used, was dropped.

studies, therefore, may more nearly represent the true condition regarding family stability.

In *desertion and nonsupport* children are much more in evidence and thus present a counterpart to the alleged relationship in divorce. It should be remembered that in some cases desertions become divorces, while in others readjustments and reconciliations may occur. Some religious and racial groups are also wont to take recourse to desertion rather than divorce.

Neither divorced nor deserted, and nowhere recorded, is another large group of families, separated or in serious domestic discord, about which we know little. Marital stability, in the final analysis, may have no general relationship to childbearing.

OCCUPATIONAL LEVEL AND MARITAL DISRUPTION

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BACKGROUND. Because of the absence of a centralized federal collection of marriage and divorce records, "family" statistics are discouragingly few. Through the establishment of a national registration area for births and deaths, a wealth of statistical information has accrued in these areas, in contrast to the dearth of national statistics in the significant areas of marriage and divorce. While the sociological literature abounds with factual material relating to birth rates, death rates, infant mortality, morbidity, and life expectancy, some of the most basic facts about divorce remain unknown. For example, there are no *national divorce statistics* to indicate whether the Negro divorce rate is higher or lower than that of whites, whether the remarriages of divorced persons are more or less stable than first marriages, whether divorce is more prevalent among the educated or the uneducated, or whether the age (or relative age differences) at the time of marriage is related to marital stability.

In the absence of national divorce data, researchers in the family field have utilized other sources in an attempt to supply the missing information: Kephart and Monahan compared the racial and nativity proportions in county divorce cases with comparable population figures derived from U. S. Census

tabulations;¹ Jacobson explored relationships between presence of children and divorce by analyzing data collected from county and state vital statistics offices;² working with divorce records of Iowa and Missouri, Monahan analyzed the relationship between remarriages and divorce;³ Christensen and Meissner, examining county birth, marriage and divorce records, reported on premarital pregnancy as a factor in divorce;⁴ Kephart and Strohm, utilizing local divorce records and newspaper marriage listings, investigated the stability of "Gretna Green" marriages;⁵ on the basis of his own inter-

¹ William M. Kephart and Thomas P. Monahan, "Desertion and Divorce in Philadelphia," *American Sociological Review*, 17 (December, 1952), pp. 719-727.

² Paul H. Jacobson, "Differentials in Divorce by Duration of Marriage and Size of Family," *American Sociological Review*, 15 (April, 1950), pp. 235-244.

³ Thomas P. Monahan, "How Stable Are Remarriages?" *American Journal of Sociology*, 57 (November, 1952), pp. 280-288.

⁴ Harold T. Christensen and Hanna H. Meissner, "Premarital Pregnancy as a Factor in Divorce," *American Sociological Review*, 18 (December, 1953), pp. 641-644.

⁵ William M. Kephart and Rolf B. Strohm, "The Stability of Gretna Green Marriages," *Sociology and Social Research* (May-June, 1952), pp. 291-296.

view-study with divorcees, together with data derived from previous studies, Goode reexamined the relationship between economic factors and divorce.⁶ There are other examples, and the foregoing list is merely illustrative of the areas that have been studied. These studies have been published within the last few years, and nearly all have a common motivating factor; i.e., they were undertaken primarily because of the absence of national divorce data bearing upon the specific area that was investigated. And in the foreseeable future it is probably through these segmental studies that our statistical knowledge of the factors associated with marital discord will be increased to a fund of respectable proportion. The purpose of the present paper is to shed additional light on the relationship between occupational factors and marital disruption.

In passing, it might be mentioned that the whole area of marital stability and socio-economic status has received little attention from research sociologists. Students of the class structure, for example, have shown little or no interest in relative class frequencies of divorce and separation. And while the major marital adjustment surveys have all included an analysis of socio-economic variables, for very practical reasons all of these surveys—with the exception of Harvey Locke's⁷—have centered attention largely or entirely on the upper-middle and upper classes. In the smaller psychological or sociological studies reporting on specific phases of marital adjustment, sexual factors and personality patterns have been investigated extensively while socio-economic variables are largely ignored. Goode pinpointed the discrepancy when he said:

It is an interesting commentary on recent sociological history that while we have tended to reject economic factors partly because they are on another emergent level, we have not done the same with so-called personality factors. Rather, we have used the latter as standard tools in our sociological analyses of the family, although they are as clearly on a

⁶ William J. Goode, "Economic Factors and Marital Stability," *American Sociological Review*, 16 (December, 1951), pp. 802-812.

⁷ Harvey J. Locke, *Predicting Adjustment in Marriage: A Comparison of a Divorced and a Happily Married Group*, New York: Henry Holt and Co., 1951.

different emergent level as economic or political variables. This has led us to stress the "causative" character of personality and psycho-dynamic variables in the shaping of economic processes, and to gloss over the real possibility that economic variables may equally well be important in the shaping of personality structures.⁸

It is hoped that the following analysis will focus sociological attention on the need for a wider examination of the role of socio-economic factors in marital adjustment.

DIVORCE

The last attempt by the Census Bureau (or by the National Office of Vital Statistics) to secure occupational information from *divorce records* was for the period 1887-1906. For this period the occupational distribution of divorced husbands was compared to that of married males in the population, the latter being derived from census data for the year 1900. The tabular comparisons indicated that actors, musicians, commercial travelers, and doctors had the greatest overrepresentation in divorce, although no discernible socio-economic pattern emerges when the divorce ratios are arranged by major occupational categories.⁹ In any case, these early data were routinely incorporated and interpreted by writers of family texts. It became habitual for text writers, basing their conclusions on the 1887-1906 data, to state, in effect, that "divorce characterized persons whose occupations call for contact with the opposite sex under conditions conducive to familiarity." Divorce rates, for example, were said to be high among doctors "not merely because the physician has numerous contacts with attractive women, but also because the physician's wife is forced to lead a restricted social life." There is no reason to list the texts nor to parody the sometimes ingenious interpretations. It is true, though, that uncritical acceptance of these early divorce data was characteristic of practically all of the most widely used family texts and indicates an almost blind faith in the Census tabulation.

⁸ Goode, *op. cit.*, p. 803.

⁹ Bureau of the Census, *Marriage and Divorce, 1887-1906*, Bulletin 96, 2nd ed., Washington, D. C.: Government Printing Office, 1913, pp. 46-51.

In a paper read at the March, 1951 meeting of the Eastern Sociological Society, the writer cautioned against the wholesale acceptance of the data published in the 1887-1906 Census Report. Actually such a caution should have been unnecessary inasmuch as the limitations of the data are clearly stated in the Report itself. The very first paragraph dealing with occupations begins as follows:

An attempt was made to secure a statement of the occupation of the husbands involved in the divorce suits, but the effort cannot be characterized as successful. An occupation was reported for but 226,760 divorced husbands, only 24 per cent of the total number divorced during the period covered by this investigation. . . .

Returns so incomplete can hardly be accepted as typical, or as indicating the proportion of divorced men in the different occupations. . . . The comparison would not be so unreliable and unsatisfactory if the degree of incompleteness had been the same for all parts of the country. This, however, was not the case. In some states a return of occupation was received for 50 per cent or more of the total number of divorces. In New Jersey the percentage reached 81.1. In other states practically no returns were received. . . . Moreover, it is probable that the occupation is more apt to be recorded in those cases where alimony is asked than in other cases. . . . Perhaps the only safe conclusion that could be deduced from the above [occupational] table, is that a large proportion of the persons obtaining divorces come from those occupations in which a large proportion of the population are engaged.¹⁰

Partly because of textbook acceptance and interpretation of this early material, and perhaps also because of the "drawing room manner" of depicting divorce by Hollywood and by fiction writers, the impression grew that divorce was largely a middle- and upper-class phenomenon. Contrary findings—ecological studies by Bossard¹¹ and Schroeder,¹² and an occupational study by Weeks based on the children of divorced

¹⁰ Bureau of the Census, *op. cit.*, pp. 46-48.

¹¹ James H. S. Bossard and Thelma Dillon, "Spatial Distribution of Divorced Women," *American Journal of Sociology*, 40 (1935), pp. 503-507.

¹² Clarence W. Schroeder, *Divorce in a City of 100,000 Population*, Peoria, Ill.: Bradley Polytechnic Institute Library, 1939.

and non-divorced parents¹³—went largely unnoticed until William Goode's recent survey.¹⁴ After a recapitulation of the previous studies, together with a presentation of occupational data drawn from his own study of divorcees, Goode concludes that "there is a rough inverse correlation between economic status and rate of divorce."¹⁵ His conceptual analysis of the inter-relatedness of marital stability and economic patterns appears to be one of the most definitive yet made on the subject.

The Weeks study,¹⁶ based on the responses of Spokane school children, showed the following relationship between occupation and divorce rate (number of divorces per 100 families):

Professional	6.8
Proprietors	8.4
Clerical	10.4
Skilled	11.6
Semiskilled	13.4
Unskilled	7.3

The April, 1949 Sample Census Survey¹⁷ contained occupational data "by sex and marital status," and by dividing the "married, wife present" per cent into that of "other marital status," Goode computed an occupational index of what he termed "proneness to divorce."¹⁸ His figures are as follows:

Professional	67.7
Proprietors	68.6
Clerical and sales	71.8
Skilled	86.6
Semiskilled	94.5
Service	254.7
Unskilled	180.3

On the basis of his own study of divorced mothers, Goode's corresponding figures are as follows:¹⁹

¹³ H. Ashley Weeks, "Differential Divorce Rates by Occupations," *Social Forces*, March, 1943, pp. 334-337.

¹⁴ Goode, *op. cit.*

¹⁵ *Ibid.*, p. 803.

¹⁶ Weeks, *op. cit.*

¹⁷ Bureau of the Census, *Current Population Reports, Labor Force*, Series P-50, No. 22, April 19, 1950, Table 5, pp. 11-12.

¹⁸ Goode, *op. cit.*, p. 805.

¹⁹ *Ibid.*

Professional, proprietors	62.6
Clerical, sales, service	63.6
Skilled	89.9
Semiskilled	142.4
Unskilled	166.7

All of the above studies have certain weaknesses which were unavoidable because of the nature of the project-design. The Weeks and Goode studies dealt with the occupations of *parents*, whereas a large proportion of divorced couples are childless. Such studies may contain a systematic error. The Sample Census Survey classified a divorced-but-remarried-person as married, not as divorced. Since most divorcees remarry, the Survey computations may contain a residual bias.

In spite of their limitations, however, these studies offer valuable clues to a hitherto clouded issue. Moreover, they are in general agreement, and, as Goode has pointed out, when they are analyzed in conjunction with the previously mentioned ecological surveys by Bossard and Schroeder, the evidence all points in the same direction; i.e., toward a rough inverse relationship between frequency of divorce and occupational level.

The writer's occupational data, based on a study of 1,434 Philadelphia divorces²⁰ has the advantage of being derived directly from a random sample of *divorce records*, the first such transcription since the often-interpreted 1887-1906 Census data. Major occupational groupings for males in the divorce sample were compared with male occupational categories for the City of Philadelphia, and these data appear in Table 1.

It can be seen that the upper occupation levels—the professional and managerial (proprietors) categories—are clearly underrepresented in divorce actions; the middle groups—clerical, sales, and skilled workers (craftsmen, foremen)—are represented to the degree that would be expected on the basis of their population ratios, while the semiskilled (operatives) occupations are overrepresented. Thus, the Philadelphia findings are in general agreement with the previous studies which point to a rough inverse

TABLE 1. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORIES OF TOTAL MALES AGED 14 AND OVER IN PHILADELPHIA IN 1940 AND 1950, AND A SAMPLE OF MALE DIVORCEES IN PHILADELPHIA, 1937-1950

Occupational Category	Total Males:		Males in Divorce Sample, 1937-1950
	1940*	1950†	
Professional	6.3	7.9	4.3
Proprietors	10.6	10.8	5.0
Clerical and sales	19.3	17.5	19.6
Skilled	20.6	22.3	20.4
Semiskilled	24.5	23.9	35.4
Labor-service	18.7	17.6	15.3

Sources: 1940 figures—*Sixteenth Census of the United States, 1940 Population*, Vol. III, The Labor Force, Part 5, Reports by States: Pennsylvania-Wyoming, Table 20, p. 121. 1950 figures—*Seventeenth Decennial Census, 1950*, Vol. II, Part 38, Pennsylvania, Table 35, pp. 38-135.

* N=485,086, including 3,704 occupations not reported.

† N=552,711, including 6,500 occupations not reported.

‡ N=1,434.

correlation between occupational level and frequency of divorce. The slight underrepresentation in divorce at the bottom labor-service category (Table 1) may or may not reflect the actual situation. While it is relatively simple to classify the upper and middle occupational groups, it is more difficult to separate the semiskilled and the unskilled workers on the basis of the information contained in the divorce record. Perhaps the safest generalization would be that the upper occupational levels are underrepresented, the middle occupational groups "hold their own," and the lower occupational levels are overrepresented in divorce actions.

DESERTION

After analyzing the Philadelphia divorce data, it was the writer's belief that marital patterns of the lowest occupational level—the laborer or unskilled group—might be better understood in terms of the high desertion rate that is commonly attributed to this class. For many, many years desertion has been referred to in family texts as "the poor man's divorce." The writer discovered, however, that this latter phrase is one of the clichés that apparently has no empirical basis. In fact, the desertion "studies" that

²⁰ For an account of the methodology employed in the Philadelphia study, see Kephart and Monahan, *op. cit.*, pp. 722-723.

are still being quoted in family texts are, for the most part, reports that emanated from social workers or charitable organizations from twenty to fifty years ago; e.g., reports by Z. Smith in 1901,²¹ Lilian Brandt in 1905,²² Earle E. Eubank in 1916,²³ Joanna C. Colcord in 1918.²⁴ Even the statistical studies of desertion and nonsupport that were done somewhat later by Patterson²⁵ and Mowrer²⁶ contained no clue to the occupations of the husbands, despite the fact that these studies were based on municipal court records.

Failing to unearth any pertinent statistical information, the writer secured the permission of the Philadelphia Municipal Court in 1952 to make an occupational analysis of all the desertion and nonsupport cases for the year 1950. This year was selected so that the desertion cases could be compared occupationally with the decennial census data and also with the aforementioned Philadelphia divorce sample. So far as the writer is aware, the end result was the first series of tabulations in the United States dealing specifically with the occupational distribution of desertion cases.²⁷ Since the writer was per-

²¹ Z. D. Smith, *Deserted Wives and Deserting Husbands: A Study of 234 Families*, Boston: Associated Charities of Boston, 1901, Publication No. 75.

²² Lilian Brandt, *574 Deserters and Their Families*, New York: The Charity Organization Society, 1905.

²³ Earle E. Eubank, *A Study of Family Desertsions*, private edition of the University of Chicago, doctoral dissertation, distributed by Chicago University Libraries, 1916.

²⁴ Joanna C. Colcord, "Desertion and Non-Support in Family Case Work," *The Annals of the American Academy of Political and Social Science*, May, 1918, pp. 91-102. Joanna C. Colcord, *Broken Homes, A Study of Family Desertion and Its Social Treatment*, New York: Russell Sage Foundation, 1919.

²⁵ S. H. Patterson, "Family Desertion and Non-Support," *Journal of Delinquency*, September, 1922, pp. 249-282, and November, 1922, pp. 299-333.

²⁶ E. R. Mowrer, *Family Disorganizations*, Chicago: University of Chicago Press, 1927, rev. ed., 1939. See also "The Trend and Ecology of Family Disintegration in Chicago," *American Sociological Review*, 3 (June, 1938), pp. 344-353.

²⁷ The writer is indebted to John Reinemann, Director of Probation for the Philadelphia Municipal Court, who was instrumental in making the Court records available, and to Thomas Monahan, Assistant Statistician for the Court, who made the necessary runs on the I.B.M. cards and who provided a number of invaluable suggestions.

mitted to record the occupational information directly onto the Court's punch-cards, it was possible, in the subsequent analysis, to hold constant such items as the Court routinely collects; e.g., race, nativity, marital status, religion, and type of ceremony. Before these data are presented, it might be well to comment on the general prevalence of desertion in the United States.

There are various kinds of extra-legal or "informal" marital separations, and from time to time United States census figures have given some idea of their prevalence. In addition to the Sample Surveys of the type previously mentioned, the 1940 decennial census revealed that there were 3.1 million married persons who were not living with their spouses as compared to some 1.4 million who stated that they had been divorced.²⁸

Many of these separations ultimately become divorces, although apparently large numbers do not. It is quite possible that of the various kinds of extra-legal separations, desertion is numerically the most significant. In metropolitan areas, for example, there is evidence to indicate that, over the years, desertion is much more prevalent than di-

TABLE 2. DIVORCES AND DESERTIONS:
PHILADELPHIA, SELECTED YEARS

Year	No. of Divorces	No. of Desertions
1915	878	3,832
1920	1,960	3,924
1925	1,780	4,559
1930	1,825	4,178
1935	1,497	3,617
1940	1,842	3,584
1945	3,476	3,600
1950	3,167	2,191*

* The relatively small number of desertions in 1950 is due primarily to a different system of classifying "friendly service" cases; i.e., those cases involving intra-family quarreling which resulted in no formal action. In recent years the number of these cases has increased.

vorce. Comparative figures for Philadelphia reveal that for a period of almost four decades the number of desertions has greatly exceeded that of divorces. (See Table 2.)

²⁸ See William F. Ogburn, "Marital Separations," *American Journal of Sociology*, 49 (January, 1944), pp. 316-323.

The figures in Table 2 do not denote the actual number of desertions in Philadelphia for those years, but represent only the cases reported to the Municipal Court. The term "desertion," incidentally, as it refers to Philadelphia data, signifies desertion or non-support of the wife, the wife and child, or the child only. In typical desertion cases the wife comes to court primarily because the husband has reneged on his financial obligations. The court endeavors to locate the husband and—with the ultimate recourse to a support order—attempts to get him to resume his familial responsibilities. The legal involvements which a deserted wife formerly encountered have been largely eliminated under a policy by which the court more or less "takes the side of the wife" in her quest for family support. The impetus for handling desertion cases in this manner increased greatly following the establishment of the first family court in Cincinnati, Ohio, in 1914.

It should also be mentioned that the racial factor is much more significant in desertion than in divorce. While the Negro divorce rate in Philadelphia has been increasing, the figure is still somewhat below the rate of divorce among whites. In desertion cases, however, Negroes are overrepresented, as the following figures indicate:

For most purposes, also, it is desirable to give separate statistical treatment to the foreign born and to the remarried.²⁹

Turning now to the data that were collected from the Municipal Court records, Table 3 shows the occupational distribution of the foregoing groups as they were involved in the 1950 Philadelphia desertion cases.

While the data in Table 2 show the non-whites to be concentrated in the lower occupational classes, the remarkable finding is that in none of the white groups represented is there any substantial justification for referring to desertion as the "poor man's divorce"! As a matter of fact, *43.6 per cent of the white desertions are derived from the upper half of the occupational ladder.* Moreover, when the occupational distribution of Philadelphia desertion cases is compared to that of the Philadelphia divorce sample, a surprising degree of similarity is evident. These comparative figures are shown in Table 4. In order to make the divorce and desertion cases comparable, both sets of data have been refined to include only native-white first marriages.

The figures in Table 4 are indeed striking. The supposed preponderance of desertion cases in the lower occupational levels fails to emerge. True, in the bottom labor-service category the desertion cases show a slightly higher figure than in the divorce sample—14.8 to 11.8 per cent respectively—but this situation is reversed in the semiskilled class.

Year	No. of Phila. Desertions	Per Cent Nonwhite	Per Cent Nonwhite Married Males in Phila.
1940	3,584	24.0	12.5
1950	2,191	40.3	17.1

TABLE 3. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY, RACE, NATIVITY, AND PREVIOUS MARITAL STATUS OF DESERTING HUSBANDS, PHILADELPHIA, 1950

²⁹ For a tabular analysis of the extent to which these groups are involved in Philadelphia divorce and desertion cases, see Kephart and Monahan, *op. cit.*, pp. 724, 726.

TABLE 4. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY OF MALE DESERTERS AND DIVORCEES: NATIVE WHITE FIRST MARRIAGES, PHILADELPHIA, 1950

Occupational Category	Divorce Sample (N=939)	Desertion Cases (N=922*)
Professional	4.9	3.1
Proprietors	4.4	8.7
Clerical and sales	20.4	14.8
Skilled	20.0	21.6
Semiskilled	38.6	37.0
Labor-service	11.7	14.8
	100.0	100.0

* Including 75 unemployed and 55 cases in which the occupation was not reported.

Combining the two lowest groups—the labor-service and the semiskilled—we find 50.3 per cent of the divorces falling into these categories as compared to 51.8 per cent of the desertions. Moreover, in both the proprietor and skilled worker groups the desertions show a higher percentage than the divorces!

Perhaps the most meaningful comparison, for our purposes, is that between the occupational distribution of males in the Philadelphia desertion cases and the occupational distribution found in the Philadelphia male population, with race held constant. Unfortunately for sociologists, the 1950 Census volumes were concentrated on metropolitan areas rather than on cities with respect to items such as occupation and income. However, it was possible to procure satisfactory occupational data by race for the City of Philadelphia by utilizing 1950 census tract figures. The resulting comparison between the occupational categories existing in the city and those represented in the Philadelphia desertion cases is shown in Table 5.

Among both whites and Negroes it is evident that the upper occupational classes are underrepresented in desertions (Table 5). When the bottom three occupational categories (service, laborer, and unemployed) are combined, the figures indicate that for the whites these classes are slightly overrepresented in desertions, while among Negroes, surprisingly, these classes are slightly underrepresented. Again, the supposed *predominance* of desertions at the lower end of the occupational scale fails to emerge. Among the whites the laborer and

TABLE 5. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY AND RACE OF TOTAL MALES AGED 14 AND OVER, AND OF DESERTING HUSBANDS, PHILADELPHIA, 1950

Occupational Category	Whites		Nonwhites	
	Total Males *	Deserting Husbands †	Total Males ‡	Deserting Husbands §
Professional	8.2	3.7	2.2	1.0
Proprietors	11.4	9.8	2.8	2.0
Clerical and sales	17.8	12.6	8.0	.80
Skilled	22.6	20.2	10.1	6.1
Semiskilled	22.3	32.5	21.5	31.5
Service	7.0	6.4	17.0	12.0
Laborer	4.6	6.7	25.0	27.6
Unemployed	6.1	8.1	13.4	11.8
	100.0	100.0	100.0	100.0

Sources: United States Bureau of the Census, *U. S. Census of Population, 1950*, Vol. III, Census Tract Statistics, pp. 57, 205-211. The nonwhite figures, column 3, Table 5, are based on Census Tracts containing 250 or more nonwhite persons. The white figures, column 1, Table 5, include total civilian labor force for Census Tracts containing less than 250 nonwhites.

* N=502,481, including 4,905 cases in which occupation was not reported.

† N=1,305, including 76 cases in which occupation was not reported.

‡ N=92,956, including 1,595 cases in which occupation was not reported.

§ N=886, including 53 cases in which occupation was not reported.

semiskilled groups are equally overrepresented in desertion cases, while among the Negroes the greatest overrepresentation is found in the semiskilled category. Also among whites, and to a lesser extent among Negroes, it can be seen that the proprietor group is well in evidence in Philadelphia desertions.

The Philadelphia Municipal Court has not published occupational tables in any of its Annual Reports, the present material being derived and classified by the writer directly from Court records. In the 1952 Annual Report, however, a small statistical study is reported, one section of which shows some similarity to the occupational data reported above.

The study was based on a random sample of 118 cases of wives coming to court with a complaint of assault and battery. . . . In this small group of cases no professional occupations were found and only one semi-professional person, a draftsman. . . . The

clerical group was only moderately in evidence; but the proprietor and official class were well represented . . . among the whites the indication is that the husbands are primarily found in the skilled and semiskilled occupations . . . therefore, the cases coming to court are from the middle economic classes. . .³⁰

Prior Divorce in Desertion Cases. It should be kept in mind that a significant percentage of desertion cases end in the divorce court, although under present reporting procedures it is not possible to determine what this figure is. Our Philadelphia data do show that in 15.9 per cent of the native white and 7.9 per cent of the Negro desertion cases one or both spouses had a prior divorce. The Negro group was too small to permit an occupational analysis, although among the native whites a previous divorce experience was found to vary directly with occupational level. (See Table 6.)

TABLE 6. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY OF NATIVE WHITE DESERTIONS INVOLVING A PRIOR DIVORCE BY ONE OR BOTH PARTIES,
PHILADELPHIA, 1950

Occupational Category	No. of Cases	Prior Divorce
Professional	36	25.0
Proprietors	97	24.7
Clerical and sales	143	24.7
Skilled	215	15.8
Semiskilled	358	16.5
Service	69	13.0
Laborer	70	11.4
Unemployed	90	10.0
Not reported	65	9.2
Total	1,143	

Type of Marriage Ceremony in Desertion Cases. Evidence adduced from various marital adjustment studies suggest a positive relationship between religious devoutness and marital happiness. There also seems to be a relation between type of marriage ceremony and later adjustment. Locke, for example, states that "Being married by a justice of the peace is not preferred in our culture and is unquestionably associated with maladjustment in marriage . . . more

than 1 in 4 divorced men and women were married by a justice of the peace as compared with 1 in 8 happily married men and women."³¹ "Gretna Green" marriages have also been found to be characterized by a relatively high divorce rate.³² It would be expected therefore, that marriages which ultimately end in desertion or divorce would show a relatively high percentage of civil ceremonies—and such seems to be the case. Philadelphia data reveal that for native-white first marriages approximately one-fifth of the divorce and one-fourth of the desertion cases had been married by a civil ceremony. This is probably higher than the city-wide marriage figure, although comparative data are not currently available.

Since there appears to be a rough inverse relationship between frequency of divorce and desertion, and occupational level, it is also logical to expect that the lower occupational classes would be characterized by an undue proportion of civil ceremonies. While comparable occupational-marriage data are not presently available, the Philadelphia desertion data show the expected occupational trend for native whites. A discernible pattern for non-whites fails to emerge. Both sets of data, refined to include first marriages only, are shown in Table 7.

TABLE 7. PERCENTAGE MARRIED IN RELIGIOUS CEREMONY BY OCCUPATION AND COLOR

Occupational Category *	Per Cent Married in Religious Ceremony:	
	Native Whites	Nonwhites
Professional	88.0	75.0
Proprietors	79.7	100.0
Clerical and sales	75.2	93.1
Skilled	76.6	71.4
Semiskilled	72.7	76.9
Service	71.4	73.0
Laborer	67.2	82.3
Unemployed	69.3	82.0
Not reported	63.6	87.2

* For numerical totals see Table 3.

The Religious Factor in Desertion Cases. Ever since Mowrer's Chicago studies in the 1920's and 1930's³³ it has been known that the major religious groups are not proportionately represented in white desertions.

³¹ Locke, *op. cit.*, p. 238.

³² Kephart and Strohm, *op. cit.*, pp. 291-296.

³³ Seen fn. 26.

³⁰ Philadelphia Municipal Court, *Annual Report*, 1952, pp. 155-158.

The Chicago data revealed that Catholics were overrepresented while the Protestants and Jews were underrepresented. This situation also obtains in Baltimore³⁴ and Philadelphia,³⁵ at least in those years for which data are available. The disproportionate religious representation in desertions is believed to be of importance in the present analysis since there is also a general occupational distortion among Catholics, Protestants, and Jews. It is theoretically possible, for example, that Catholics are overrepresented in desertions because they are unduly concentrated in the desertion-prone occupational categories. In an effort to shed some light on this question, the Philadelphia desertion data were analyzed in terms of occupational-religious frequencies. Table 8

the differences between the Protestant and the Catholic occupational hierarchies are only moderate, albeit consistent. In the absence of *city-wide* occupational figures classified by major religious groups, no definitive statement can be made regarding the data in Table 8. In view of the moderate differences between the Protestant and Catholic occupational derivations in Philadelphia desertion cases, however, it appears that the overrepresentation of Catholics in these cases is only partially explainable by the occupational factor.

Other possible reasons involved in Catholic desertions are: (a) marital conflicts which stem from differing nationality backgrounds, (b) the fact that the Catholic Church does not recognize divorce, (c) differential report-

TABLE 6. PERCENTAGE DISTRIBUTION BY OCCUPATIONAL CATEGORY OF NATIVE WHITE MALE DESERTERS, BY RELIGION OF HUSBAND, AND WIFE, PHILADELPHIA, 1950 *

Occupational Category	Both Catholic (N=431)	Both Protestant (N=197)	Both Jewish (N=83)	Husb. Prot., Wife Cath. (N=100)	Husb. Cath., Wife Prot. (N=95)
Professional	1.6	4.1	7.2	2.0	1.0
Proprietors	5.6	7.1	22.9	7.0	3.2
Clerical and sales	11.1	13.7	30.1	6.0	8.4
Skilled	17.2	21.8	13.3	19.0	24.2
Semiskilled	35.5	28.4	12.1	38.0	33.7
Service	7.2	6.1	4.8	4.0	3.2
Laborer	7.4	5.6	0.0	10.0	6.3
Unemployed	8.6	7.1	4.8	11.0	9.5
Not reported	5.8	6.1	4.8	3.0	10.5
	100.0	100.0	100.0	100.0	100.0

* Excludes 16 cases classified "other" religion.

shows the percentage distribution of occupational categories in native-white desertions as they occur among the various religious and mixed-religious groupings.

Philadelphia data show clearly that Jewish desertions are found primarily in the upper occupational brackets, in contrast to the Catholic, Protestant, and mixed Catholic-Protestant groups (Table 8). It is evident also that the Protestant desertions, on the whole, derive from a higher occupational level than Catholic cases. However, with the exception of the professional category,

ing rates between Catholics and non-Catholics insofar as those desertion cases coming to court are concerned.

CONCLUDING REMARKS

On the basis of the Philadelphia findings, as well as those of prior studies, there appears to be a rough inverse correlation between frequency of divorce and occupational level. When Philadelphia desertion cases were analyzed by occupational level, the idea of the "poor man's divorce" failed to materialize, at least to the degree that had been expected; in fact, when the bottom three occupational categories (service, laborer, unemployed) are combined, the figures indicate that for the whites these groups are only slightly overrepresented in desertion cases,

³⁴ See *Annual Reports, 1935-1938*, Probation Department, Supreme Bench of Baltimore City.

³⁵ See Thomas P. Monahan and William M. Kephart, "Divorce and Desertion by Religious and Mixed-Religious Groups," *American Journal of Sociology*, 59 (March, 1954), pp. 454-465.

while among Negroes, surprisingly, these categories are slightly underrepresented.

The above findings raise a perplexing question, namely, what is the family stability pattern of the lowest occupational level? Is it possible that this bottom socio-economic rung maintains stronger family ties than has been supposed? This is questionable in view of the marital-adjustment studies wherein a positive correlation is found between marital happiness and home ownership, steadiness of income, etc.

Another possibility is underreporting; i.e., perhaps the lowest occupational groups experience widespread desertions which are not reported in the same ratio as the middle or upper occupational groups. Deserted wives in this instance may not wish to see their husbands return and may not report their spouses to the Court. This could account for the fact that among Negroes the lowest classes are underrepresented in reported desertion cases, since in these groups the failure of the husband to assume his marital responsibilities is still a lingering tradition. Another reason for possible underreporting among the wives of the bottom class might involve ignorance of the law, or a sense of futility in "trying to get blood out of a stone."

Balanced against such possibilities is the fact that these (lower class) wives *must* have family support, and they cannot get relief from the Department of Public Assistance so long as they have a husband whom they have not reported to the Court. Since the Department of Public Assistance is the only money-giving organization in the city, it can be argued logically that if there is any underreporting of desertion and nonsupport it would be expected to occur in the upper occupational levels, where poverty and the need for family support might not be such pressing problems.

It is the writer's belief that insofar as the family patterns of the lowest occupational level are concerned, nobody knows very much. Most of our premarital and marital research has centered around the college population. Whether or not family research should, or could, be oriented more in the direction of the lowest rather than the highest socio-economic groups is a matter of opinion, but until more factual material is gathered from the former category, it would seem wise for text writers to restrict their generalizations regarding family stability to the socio-economic categories for which data have been collected.

COMMUNICATIONS AND OPINIONS



UNCOMPLIMENTARY REMARKS ON COMPLEMENTARY NEEDS

To the Editor:

When the *Review* published "The Theory of Complementary Needs in Mate Selection: An Analytic and Descriptive Study" by Robert Winch and Thomas and Virginia Ktsanes in June, 1954, I suffered in silence. But now that a second article has appeared ("The Theory of Complementary Needs in Mate Selection: A Test of One Kind of Complementariness (sic)" by Robert Winch, February, 1955), I feel compelled to take pen in hand.

These investigators have erected a towering superstructure of statistical material, replete with impressive tables, correlations and terminology, on a foundation of dubious validity. A striking disproportion is evident: while statistical operations are described minutely in text and footnotes, the methodology of gathering the original data is passed over in a brief paragraph that tells us very little.

Somehow or other "need interviews" were conducted and analyzed. And just what are "need interviews?" How many hours were devoted to each? What is the scientific competence in the area of human dynamics of those who gathered and analyzed these data? The reader is left completely in the dark in regard to these fundamental matters. Are we to accept the statistical conclusions of these two articles entirely on faith? Studies like these can rise no higher than their original sources. How adequate are the original data? An answer to this basic question is conspicuously absent.

Sociologists, as such, have little competence to investigate the types of emotional needs described here. It is true that training in social psychology does provide competence for studying those dynamics more directly manifested in social interaction. Yet researchers delving into the emotional needs of spouses must be prepared to conduct depth interviews, otherwise they run a major risk of barring from consideration the most significant kinds of psychic interrelations. This deeper probing calls for special competence in psychoanalytical theories and techniques.

For all their statistical virtuosity these in-

vestigators leave me with the distinct impression that they are trying to deal with psychological phenomena which they do not understand. The interdependence of emotional needs in marriage is an important area for research; but those selecting such projects must expect to study sub-conscious factors and the complex inter-relations of ambivalences commonly found in emotional interaction between husbands and wives. So far, Winch, Ktsanes and Ktsanes do not convince this reader that they have struck pay dirt—and they cannot be convincing until their procedures for gathering data are sufficiently adequate to satisfy critical scrutiny.

As it stands now, I can quote with hearty approval Professor Winch's own words, "the results in the present paper are not as compelling as might be wished for." He speaks more truly than he knows.

CLAUDE C. BOWMAN

Temple University

REPLY BY WINCH

Patience, Bowman, the whole project cannot be reported in two papers.

R. F. W.

ON THE REVIEW OF GOULDNER'S PATTERNS OF INDUSTRIAL BUREAUCRACY

To the Editor:

Robert Dubin's review of Gouldner's *Patterns of Industrial Bureaucracy* in the February, 1955, *Review* was valuable both from the standpoint of his descriptive comments concerning industrial bureaucracy and his general criticisms of a theoretical nature (e.g., the distinction between illustration and demonstration, and especially the question that has always plagued me, "How do we empirically deal with latent functions?"). But I am sure Dubin will go on using the book, as I shall, in preference to many other possibilities.

The one point that prompts this communication has to do with the plea implied in the review for research on decision making in the

top managerial levels. Until such research is accomplished, industrial sociology and large-scale organizational theory will not be complete. Unfortunately, I see little likelihood of opportunities to carry on such research. Market, production, and inventory decisions, not to mention internal and external political decisions, within management (and others in union leaderships) understandably are not completely accessible to social scientists. The best we can do is to wait upon renegade practi-

tioners like Thomas Quinn, former vice president of General Electric, to write their memoirs, or free lancers like Peter Drucker to write quasi-academic pieces, or to use our hopelessly superficial interview techniques, or to "bore from within" (participant observation), or just do with the otherwise excellent exposition by Gouldner.

HAROLD L. SHEPPARD

Wayne University

OFFICIAL REPORTS AND PROCEEDINGS



REPORT OF THE COMMITTEE ON NOMINATIONS AND ELECTIONS

In accordance with the Constitution and with due regard to geography and fields of specialization, President Donald Young appointed the following Committee on Nominations and Elections: Harry Alpert, Robert F. Bales, Howard Becker, Nelson Foote, Harlan Gilmore, August B. Hollingshead, Harold S. Jacoby, Richard LaPiere, Harvey J. Locke, Wilbert Moore, Lowry Nelson, Meyer Nimkoff, Charles Page, Arthur L. Wood, and Rupert B. Vance, *Chairman*.

Four ballots were cast by the Committee before a slate was accepted on January 28, 1955. With the exception of the office of President-Elect, nominations were concluded with the third ballot.

The following slate resulted:

President-Elect

Philip M. Hauser
Robert K. Merton

First Vice-President

Kingsley Davis
Robin M. Williams, Jr.

Second Vice-President

Meyer F. Nimkoff
Calvin F. Schmid

Committee on Publications

Katharine Jocher
Guy E. Swanson

Council

John W. Albig
Reinhard Bendix
Robert Bierstedt
John A. Clausen

Amos H. Hawley
Horace M. Miner
Albert J. Reiss, Jr.
David Riesman

Ballots were mailed out from the Executive office on March 4, 1955. A total of 1088 ballots were received, which was 52.6 percent of the voting membership. Only 15 of these could not be counted. Thirteen had been mailed after the vote had been closed and two came from non-voting members. Write-in votes were sparing. No one person received more than 3 write-in votes for any office.

The tellers, appointed by the chairman, were Selz Mayo of North Carolina State College and Joseph J. Spengler of Duke University, assisted by Charles Nam and Elizabeth M. Fink. Procedural instructions from the Executive Office were carefully followed and all identification of ballots was removed.

The ballots were counted on April 30, 1955. The following nominees were elected:

President-Elect

Robert K. Merton

First Vice-President

Robin M. Williams, Jr.

Second Vice-President

Meyer F. Nimkoff

Committee on Publications

Katharine Jocher

Council

Reinhard Bendix
Robert Bierstedt
Amos H. Hawley
David Riesman

RUPERT B. VANCE, *Chairman*

CONSTITUTION OF THE AMERICAN SOCIOLOGICAL SOCIETY

ARTICLE I. NAME

Section 1. The Society shall be known as the American Sociological Society.

ARTICLE II. OBJECTS

Section 1. The objects of the Society shall be to stimulate and improve research, instruction and discussion, and to encourage cooperative relations among persons engaged in the scientific study of society.

ARTICLE III. MEMBERSHIP

Section 1. Any person interested in the objects of this Society shall be eligible to membership. The forms of membership and the privileges and dues of members are set forth in By-Laws, Art. I.

ARTICLE IV. OFFICERS

Section 1. The officers of the Society shall be a President, a President-Elect, a First Vice-President, a Second Vice-President, a Secretary, an Editor of the *American Sociological Review*, and an Executive Officer. The President-Elect, First Vice-President and Second Vice-President shall be elected by the membership. The term of the Vice-Presidents shall be one year. The President-Elect shall serve for one year, and shall then automatically become President for a one-year term. The Secretary, the Editor and the Executive Officer shall be elected by the Council for terms to be fixed by the Council. (See By-Laws, Art. III.)

Section 2. The President of the Society shall preside at all business meetings of the Society. He shall be Chairman of the Council and of the Executive Committee. He shall perform all duties assigned him by the Society and the Council. In the event of his death, resignation, or absence, except as otherwise provided in this Constitution, his duties shall devolve successively upon the First Vice-President, the Second Vice-President, and the President-Elect.

ARTICLE V. OFFICIAL PUBLICATIONS

Section 1. The Society shall maintain a journal entitled, the *American Sociological Review*. (See By-Laws, Art. IV.)

Section 2. The Society shall issue such other regular or occasional publications as it deems necessary in the promotion of its objectives.

ARTICLE VI. COMMITTEES AND BOARDS

Section 1. The Society shall constitute a Council from among its members who are eligible to vote. The Council shall be the permanent governing body of the Society, except insofar as the Society delegates governmental functions to officers or to other committees independent of or in cooperation with the Council.

Section 2. The Council shall consist of the President, the President-Elect, the two Vice-Presidents, the Secretary, the Editor of the *American Sociological Review*, past presidents for the first three consecutive years after completion of their respective terms as President, representatives of regional or affiliated groups, a minimum of twelve elected members, and such other members of the Society as may be prescribed in the By-Laws. With the exception of *ex officio* members of the Council the term of membership shall be three years, and approximately one-third of the members are to be elected each year.

Section 3. The Council shall be responsible for the formulation of policy and the general direction of the affairs of the Society, and shall call regular and special meetings of the Society. It shall have the power to fill vacancies in its elective membership occasioned by death, resignation, or failure to elect, such appointees to hold office until the next annual meeting. Vacancies among the representatives of affiliated societies shall be filled by the societies affected.

Section 4. One-third of the total membership of the Council shall constitute a quorum at meetings, and a majority vote of those members in attendance shall control its decisions. When the Council is not in session, questions may be submitted by mail to its members for vote; a simple majority of those responding shall control decisions on such questions. However, no vote of the Council shall be binding unless the majority vote includes at least one-third of the total membership of the Council.

Section 5. The Council shall constitute from among its members an Executive Committee which shall have continuing responsibility for the implementation of the policies and programs established by the Society or the Council. The Executive Committee shall have all the powers of the Council when the Council is not in session subject to such general directions and instructions as the Council may give, and the

Executive Committee shall make regular reports of its activities to the Council.

Section 6. The Executive Committee shall consist of the President, President-Elect, the retired president for the first year after his term of office, the Secretary, the Editor of the *American Sociological Review* and four members to be elected from the Council by the Council, two of whom are to be elected each year for a two-year term.

Section 7. The Society and the Council may establish such committees as may be necessary for the conduct of the Society's affairs.

ARTICLE VII. MEETINGS

Section 1. The Society shall hold at least one meeting each year, at a time and place to be determined by the Council. At each annual meeting there shall be at least one general meeting of the membership at which the Officers and the Council shall report to the Society and any business of the Society may be transacted.

ARTICLE VIII. SPECIAL FUNDS AND ENDOWMENTS

Section 1. The Society may solicit and receive special funds and endowments. Expenditure of such funds shall be authorized only by the Council.

ARTICLE IX. AMENDMENTS

Section 1. The Constitution may be amended by a two-thirds affirmative vote of those voting in a referendum submitted by mail to the voting members of the Society.

Section 2. Amendments may be proposed by the Council, or by petition of at least 50 voting members of the Society, or by a two-thirds majority of the members present and voting at a business meeting of the Society.

Section 3. All proposed amendments to the Constitution shall be communicated to the voting membership at least fifty days prior to the vote on the amendment.

BY-LAWS OF THE AMERICAN SOCIOLOGICAL SOCIETY

ARTICLE I. MEMBERSHIP AND DUES

Section 1. The membership of the Society shall consist of the following classes: Active, Associate, Joint, Student, Life, Honorary, and Emeritus. Except as hereinafter specified the dues for membership in the Society shall be ten dollars per annum, payable in advance, without initiation fee. Each member shall be entitled to one subscription to the *Review*. Active, Life, and Emeritus members shall be eligible to vote and to hold office.

Section 2. To be eligible for Active membership an applicant must have:

- a Ph.D. or equivalent professional training in Sociology, or
- substantial professional achievement in Sociology, or
- a Ph.D. or its equivalent, or substantial professional achievement in a closely related field, provided that the applicant's interest and activities have sociological emphasis or implication, or
- been classified as an Active member on January 1, 1951.

Section 3. Registered undergraduate and graduate students in residence at educational institutions who have not completed all requirements for the Ph.D. degree and who are spon-

sored by a member of the Society may be admitted to Student membership in the Society for a period not to exceed five years. The dues shall be five dollars per annum, payable in advance. This membership shall include one subscription to the Society's publication(s) and the right to attend all meetings of the Society, but not the right to vote or hold office.

Section 4. Any Active or Associate member of the Society may become a Donor by the payment of dues of twenty dollars or more per annum.

Section 5. Any Active member of the Society may become a Life member by the single payment of two hundred dollars. Joint Life members shall pay \$230. Life members shall have the rights and privileges of Active membership.

Section 6. Any Active member of the Society when retired by his institution, provided that he has paid dues to the Society continuously for at least twenty years, may become an Emeritus member of the Society. Emeritus members pay no dues but shall have all the rights and privileges of Active membership.

Section 7. Honorary membership in the Society may be conferred upon any person by election by the Council. Honorary members are not entitled to vote or to hold office in the Society, but shall otherwise enjoy all the rights and privileges of membership.

Section 8. Any person interested in study, teaching, research or practice in Sociology, or in closely related fields of scientific interest, may be admitted to Associate membership in the Society upon the payment in advance of ten dollars per annum. An Associate member shall be entitled to one subscription to the Society's publication(s) and to attend all meetings of the Society, but shall not vote or hold office.

Section 9. Joint membership in the categories for which they are eligible may be taken out by a husband and wife upon payment in advance of eleven dollars per annum, both of whom shall have all the rights and privileges of membership in the Society, provided that they shall together be entitled to one subscription to the Society's publication(s).

Section 10. Decisions concerning eligibility for membership in any class and recommendations for election of honorary members shall be made by the Classification Committee.

Section 11. Upon the failure to pay annual dues, the privileges of membership in the Society, including subscriptions to the Society's publication(s) and the right to vote, shall be suspended on June 1, and membership shall be terminated on December 31 of the year following the last full-year payment of dues.

Section 12. An application for membership received prior to October 1 in any year shall be dated back to January 1 of that year, and publications of the Society for the current year shall be sent to the member. An application for membership received on or after October 1 shall be dated forward to January 1 of the next year and all subsequent issues of the *Review* for the current year shall be sent to the member gratis. Student memberships, however, may, in the discretion of the Secretary, be for a 12-month period beginning with the start of the academic year.

ARTICLE II. ELECTIONS AND VOTING

Section 1. All officers of the Society and members of the Council or Committees who are elected by the membership at large shall be elected by a mail ballot of the members qualified to vote. The term of office shall begin at the close of the annual meeting of the Society in the year during which they are elected. (See Article V, Sec. 1j of the By-Laws.)

Section 2a. The Committee on Nominations and Elections shall select two names each for the offices of President-Elect, First Vice-President, and Second Vice-President, and for the one annual vacancy in the Committee on Publications. These names shall be placed on a ballot with one blank space for direct nominations from the membership for each position to be filled.

b. For the Council, the Committee on Nominations and Elections shall select twice as many names as there are annual vacancies to be filled, and shall place these on the ballot with the addition of as many blank spaces for direct membership nomination as there are vacancies to be filled.

c. These ballots shall be sent to the members eligible to vote by first class mail not later than May 15 of each year. To be valid as votes they must be returned to the Chairman of the Committee on Nominations and Elections by the date specified on the ballot, which shall be not less than 30 days from the date of mailing. Each member voting shall be required to place his signature upon the envelope in which the ballot is returned, but the election procedure shall preserve the anonymity of each ballot.

Section 3. Any person whose name is written in for a particular office by at least one-tenth of those returning ballots, and in no case by less than twenty-five persons, shall be considered as nominated for that office, if such nominations are made on the first ballot. The Committee on Nominations and Elections shall then prepare a second ballot containing the names of the candidates for each of these offices, indicating which persons were nominated by the committee and which were nominated by the membership. This ballot shall be sent to the membership within thirty days after the close of receipt of the original ballots and shall be returnable to the Chairman of the Committee within thirty days of the date it was mailed.

Section 4. In case no names are written in for any office, or in the event that any name written in is found on less than one-tenth of the ballots returned, the results of the first ballot shall determine the election for that office.

Section 5. The candidate (or candidates when two or more vacancies are to be filled) receiving the largest number of votes shall be declared elected. In case of a tie vote the Chairman of the Committee shall decide by lot in the presence of the tellers between the tied candidates. In case of the death, resignation, or inability to serve of any person elected prior to the next annual meeting the candidate who had received the next highest number of votes shall be declared elected.

Section 6. The Chairman of the Committee shall appoint tellers to assist in the tabulation of the ballots.

Section 7. The Chairman of the Committee shall report the results of the ballot to the Secretary, and shall deposit in the Executive Office all ballots cast together with all pertinent data and records of the Committee. The Executive Office shall hold the ballots and other materials

submitted by the Committee in safe custody for a period of at least eighteen months.

Section 8. The report of the Committee shall be published and distributed to the members before the annual meeting.

Section 9. By direction of the Council or the Executive Committee, mail ballots, other than elections, may be conducted by the Executive Office in a manner to be specified by the Council or the Executive Committee.

Section 10. The Secretary shall record the results of all voting by the Society.

Section 11. The business meetings of the Society shall be conducted in accordance with Robert's *Rules of Order*.

ARTICLE III. OFFICERS

Section 1. The Secretary shall record the transactions of the Society, the Council, and the Executive Committee, shall work closely with various committees as herein specified, and shall perform such other duties as the Council may assign to him.

Section 2. The Editor of the *American Sociological Review* shall perform those duties as specified under Article IV of these By-Laws and shall undertake such other functions as may be assigned to him by the Council.

Section 3. The Executive Officer shall be responsible for the management of the Society's central office; shall receive, have custody of, and disburse the funds of the Society, subject to the By-Laws and the rules and orders of the Council; shall have jurisdiction over and attend to the business details of the Society's publications within the budget authorized; and shall function to facilitate the general work of the Society and its committees. He shall be responsible, through the President, to the Council. He shall be a non-voting member of the Executive Committee and the Council, with responsibility under the President for the preparation of agenda for the meetings.

ARTICLE IV. PUBLICATIONS

Section 1. All the publications of the Society shall be under the general direction of the Publications Committee, subject to the approval of the Council.

Section 2. The Board of Editors of the *American Sociological Review* shall be composed of an Editor, the Executive Officer, and not less than six Assistant Editors, to be elected by the Council for three-year terms, at least two of which shall expire each year. The number of Assistant Editors beyond six shall be determined by the Council. The Editor and Assistant Editors, who are subject to re-election if the Council desires, shall be selected with a

view to technical competence, and, with respect to the Assistant Editors, an adequate distribution of specific fields of competence. The Editor shall be chairman of the Board.

Section 3. The composition and methods of selecting the Board(s) of Editors for any additional publication(s) shall be determined by the Council, provided that the Secretary and Executive Officer shall be members of the Board for whatever publication is to carry the reports of the Society's official business.

Section 4. The Editor of each of the official publications of the Society shall be responsible for the editorial management of the publication. He shall have the authority to appoint such associate, contributing, book review or special-issue editors as he may deem necessary. He must work within the policies established by the Committee on Publications, and within the budget as approved by the Council.

Section 5. In the event that the Society issues any publication in addition to the *Review*, the Council shall determine, on the recommendation of the Committee on Publications, the most appropriate means of publication of official news and notes, and matters pertaining to the business affairs of the Society.

Section 6. The Editor shall have the right to reject for publication any paper or other communication submitted to him.

ARTICLE V. COMMITTEES

Section 1. The Council.

a. The Council may create such temporary committees of its own or of the Society, not provided in the Constitution, as may seem useful for promoting the work of the Society.

b. All motions presented at business meetings for the creation of new committees affecting the policy of the Society shall be referred to the Council for its recommendation. The Council shall report its recommendation concerning such motions at the next business meeting of the Society.

c. The Council shall hold at least one meeting in conjunction with the annual meeting of the Society.

d. The Council shall elect the Secretary, the Editor of the *American Sociological Review*, the Editor(s) of any other publication(s) which the Society may establish, and the Executive Officer.

e. The Council may make decisions to cooperate with other societies and associations, and shall elect representatives from this Society to such other societies or associations.

f. All action of the Executive Committee and the council of continuing significance must be reported to the Society.

g. Actions taken by the membership present and voting at an annual business meeting shall be binding upon the Council, provided that the Council may, within four months of such a meeting, submit to mail referendum of the members of the Society any action taken at an annual meeting. The results of such a referendum shall supersede the action taken at the annual meeting.

h. In time of war or other national emergency the Council may suspend the holding of annual meetings or other regular activities of the Society when such action is deemed to be in accord with the national interest.

i. In the event of the suspension of the annual meeting, all actions of the Council or its Executive Committee which would normally be reported to the Society for its approval shall be communicated to the members in an official publication of the Society, and shall form a part of the Official Proceedings of the Society unless and until revised by action of the Society.

j. In the event of the suspension of the annual meeting, newly elected officers, members of the Council and others elected by the Society or the Council shall take office at the time determined by the Council and, in any event, not later than January 1 following the election.

Section 2.

a. The Executive Committee shall meet on the call of the President or on the written request of three of its members.

b. Five members of the Executive Committee shall constitute a quorum at meetings, and a majority vote of the members in attendance shall control its decisions.

c. When the Committee is not in session questions may be submitted to the members for vote; a simple majority of those responding shall control decisions on such questions.

Section 3.

a. There shall be a Committee on Publications, consisting of the President, the Secretary, the Editor of the *Review*, the editor(s) of other publication(s), the Executive Officer and a minimum of three other members elected by the membership of the Society for three year terms, provided that during the first year one shall be elected for a one year term, one for a two year term, and the other for a three year term.

b. The Publications Committee shall be responsible for policy on all publications of the Society. All proposals for the establishment of a new publication or for major modifications in an existing publication of the Society shall be subject to the approval of the Council.

Section 4. The President of the Society shall annually appoint a Committee on Nominations and Elections consisting of fifteen members. The Committee shall be broadly representative of the membership of the Society, taking into account the fields of specialization and the geographical distribution of the members. Not less than four nor more than five of the members shall be continued from the committee of the previous year.

Section 5. Each year the Council shall select the Program Committee for the annual meeting to be held two years later. The Committee shall consist of the incoming President-Elect, the Secretary, and three members of the Society elected by the Council for two year terms.

Section 6. The Council shall elect from among the voting members of the Society a Classification Committee of three members for three year terms, one member to be elected each year. The Committee shall recommend to the Executive Committee criteria for the classification of memberships in accordance with the standards set out in Article I of these By-Laws; in consultation with the Secretary devise procedures for passing upon future applications for membership; review the criteria in use from time to time with a view to recommending to the Council the application of higher standards as the standards of sociological training improve and the number of well trained sociologists increases, and exercise the powers specified in Article I, Section 10 of these By-Laws.

Section 7. The Council shall annually appoint a Committee on Training and Professional Standards. This Committee shall retain under constant review the standards for the profession as a whole. The Committee shall study current standards for professional training and research and from time to time submit its findings to the Council with recommendations.

Section 8. The Council shall annually appoint a Committee on Budget and Investment. The Chairman of the Committee shall be a member of the Executive Committee, provided that the President, the Editor of the *Review* and the Executive Officer shall not be appointed as Chairman of this Committee. The Committee in co-operation with the President, the Executive Officer, and the Editor of the *Review*, shall annually propose to the Council a budget for the ensuing year. At the end of the first half of each fiscal year it shall review the receipts and expenditures to date and if necessary make recommendations for adjustments in the budget, and it shall supervise the investment and banking activities of the Society. (See Article VI of these By-Laws.)

Section 9. The Council shall annually ap-

point a Resolutions Committee. All resolutions shall be referred to this Committee before submission to the vote of the Society. This Committee reports to the Council.

Section 10. A committee on Research shall be appointed annually by the President. This Committee shall have specific responsibility for the planning and promotion of the research activities of the Society.

Section 11. The President shall annually appoint a Membership Committee, whose members shall be selected from the various geographic areas of the country. The function of this Committee is the solicitation of membership in the Society.

Section 12. The President shall annually appoint a Committee on Public Relations which shall work with the Secretary and the Executive Officer in publicizing the activities of the Society and in conducting relations with the Press.

Section 13. Each committee must work within the budget as approved by the Council.

ARTICLE VI. BUDGET AND FINANCE

Section 1. A budget for the ensuing fiscal year covering all expenditures of the Society, including the cost of publications, shall be submitted by the Committee on Budget and Investment to the Council for approval. Proposals for changes in the budget shall likewise be submitted to the Council by the Committee, except that small interim changes (not to exceed \$100 in any budget category) may be authorized by the Executive Committee on the recommendation of the Budget Committee.

Section 2. This budget shall be binding upon the Executive Officer.

Section 3. A bond in the amount of ten thousand dollars, the cost of which is borne by the Society, shall be required of the Executive Officer or other officer or appointee handling the funds of the Society.

Section 4. The accounts of the Society shall be audited at the conclusion of each fiscal year by a certified public accountant approved by the Council. The report of this audit shall be published to the members of the Society.

ARTICLE VII. RELATION TO REGIONAL AND OTHER AFFILIATED ORGANIZATIONS

Section 1. Regional sociological societies whose membership is recruited from two or more states, and other national societies concerned with specialized phases or applications

of sociology, may affiliate with the American Sociological Society upon approval by a majority of the members of the American Sociological Society voting. Each affiliated society shall be entitled to one representative on the Council of the Society.

Section 2. Each affiliated society is free to designate its representative to the Council in its own manner provided that the representative shall be an Active member of the American Sociological Society.

Section 3. In the event that an affiliated organization meets at the same time and place as the American Sociological Society, the program of the affiliated organization shall be co-ordinated with that of the Society insofar as is possible.

Section 4. In the event that the Council finds that the conditions of affiliation are not being fulfilled by any affiliated organization, or that such affiliation is no longer to the best interests of the American Sociological Society, the Council may recommend to the Society a termination of the affiliation. Such termination shall require approval by a majority of the members of the American Sociological Society voting.

Section 5. Affiliated organizations shall be entitled to the opportunity to publish notices of their activities in the publications of the Society, and to such services by the Executive Office of the Society as the Council may determine.

Section 6. Affiliated societies, which were accepted as such prior to January 1, 1951, shall be eligible to continue as such, subject to the provisions of Section 4 of this Article.

ARTICLE VIII. AMENDMENTS

Section 1. Amendments to these By-Laws may be proposed by any member of the Society, and adoption shall require a majority vote of the members present and voting at any annual meeting of the Society, provided that no action shall be taken until the amendment has been read and has lain on the table until a subsequent business meeting.

Section 2. The Council may, upon two-thirds vote of its members, submit amendments to the By-Laws to the members of the Society by mail ballot, provided that such amendments have been communicated to the membership at least thirty days prior to the vote on the amendment. Such amendments shall be adopted upon a two-thirds affirmative vote of the members voting.

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NEWS AND ANNOUNCEMENTS



OBITUARIES

The *Review* records with regret the deaths of the following members of the Society:

Rudolph M. Binder, Professor Emeritus of New York University.

Galen M. Fisher, on January 2, 1955. Mr. Fisher received the M.A. in Sociology at Columbia University in 1922. From 1921-1934 he was Executive of Rockefeller Institute of Social and Religious Research.

Eugene T. Lies, Emeritus member of the Society, in Arizona on October 27, 1954.

Jerry Alvin Neprash, professor and Chairman of the Department of Sociology at Franklin and Marshall College. Professor Neprash received the Ph.D. in Sociology from Columbia University in 1932.

Thomas L. Norris, in Brockton, Massachusetts, July, 1954. He received the Ph.D. in Cultural Anthropology at Michigan State College in 1952 and had engaged in field research in Mexico and Costa Rica.

Edward W. Robbins, Ph.D. in Pharmacology, and an Associate member of the Society.

HILDEN GIBSON, 1910-1955

Hilden Gibson, Chairman of the department of human relations and professor of sociology and political science at the University of Kansas died April 1, 1955, following surgery. He had been ill for about three weeks. He is survived by his wife, Mrs. Veda Spencer Gibson, a daughter Hilda, 13, and a son Carl, 9.

He was born September 14, 1910, at McPherson, Kansas. In 1929, he entered the University of Kansas as one of the first class of highly selected Summerfield scholars. He received his A. B. degree from Kansas University in 1933 and his Ph.D. degree from Stanford in 1940.

In 1938, he returned to the University of Kansas as instructor of sociology and political science. He had been an expert debater in college and he soon attracted a large

campus following as a lecturer. He became assistant professor in 1941, associate professor in 1945 and full professor in 1949.

In 1946-47, during a sabbatical leave, he held a fellowship in human relations at the Harvard Graduate School of Business Administration. His close association with Elton Mayo, Dean Wallace B. Donham, Fritz J. Roethlisberger, and others of the human relations group at Harvard had a profound effect on his subsequent career. He more or less abandoned lecturing, although perhaps the most effective and most popular lecturer at K. U., in favor of case discussion and other non-directive techniques. In 1948 he helped found and became the first chairman of the department of human relations at the University. He remained active and one of the dominant figures nationally in the human relations movement until his death. He had largely planned the Ninth Annual Human Relations Conference which met at the University of Kansas the three days following his death.

Although disdainful of the academic practice of writing articles merely to pile up the list of titles in the Dean's office, Dr. Gibson did his fair share of research. He was critical of many of the attempts in sociology to imitate the natural sciences and preferred to take a more subjective, generalized, exploratory approach—what his old teacher, Elton Mayo, called the clinical method. He lived in no ivory tower and insisted that his research should be geared to important community problems and to social action. His most recent study, "Racial Integration in Employment," Community Studies, Inc., 1954, is an account of his investigation of this process in two Kansas City hospitals. His long-time interest in the improvement of instruction in general education is exemplified in his chapter in the symposium edited by Sidney J. French, *Accent on Teaching*, Harper and Brothers, 1954. His interest in the cooperative movement was demonstrated by his study published in Seba Eldridge, *De-*

Development of Collective Enterprise in the United States, University of Kansas Press, 1941, and his many years service on the Board of Directors of the K. U. Cooperative Housing Association for students.

MARSTON M. McCULLAGGAGE
University of Kansas



Air Force Personnel and Training Research Center, Montgomery, Alabama. The Manpower Research Branch (OERL) was host to a conference on Air Force manpower problems March 23-25. Participating consultants were Frank G. Dickinson, American Medical Association; T. Lynn Smith, University of Florida; Rupert B. Vance, University of North Carolina; and Lloyd G. Humphreys, Lackland Air Force Base. Manpower Research Branch staff participating in the conference included C. A. McMahan, Chief of the Branch; Thomas R. Ford; Jerry W. Combs; Stephen W. Fotis; and John W. Merck, who joined the staff in March after having completed the residence requirements for the Ph.D. in sociology at Duke University.

Child Study Association of America has appointed Orville G. Brim, Jr. (University of Wisconsin), under a grant from the Russell Sage Foundation, to conduct a three-year study of the relationship between social science and parent education. In conjunction with the project, he will conduct a seminar on research in parent education in the Sociology Department, New York University.

The Ford Foundation. The Trustees have allocated \$15 million to strengthen and extend research in mental health over the next five to ten years. In the initial stages of the program, applications will be entertained to support work in several research areas including social and community aspects of mental health; children's disorders; biological, physiological and somatic problems in mental illness; personality development and functioning; and studies in therapy. The research programs to be considered for support may be located in any qualified institution here or abroad.

The Rockefeller Foundation. Norman S. Buchanan, Professor of Economics at the University of California, Berkeley, returned to the Foundation in July as director for social sciences, succeeding Joseph H. Willits who retired in 1954. Dr. Buchanan was associate director for social sciences of the Foundation from 1947 to 1950.

Wenner-Gren Foundation for Anthropological Research. Viking Fund Medals in Anthropology for the current year were awarded on March 4 to William Duncan Strong, Columbia University, archaeology; W. W. Howells, Harvard University, physical anthropology; and Robert Redfield, University of Chicago, general anthropology.

World Association for Public Opinion Research. The annual conference of WAPOR will be held at Konstanz, Germany, September 5-9, 1955.

The conference will be held in conjunction with the annual meetings of ESOMAR—European Society for Opinion Surveys and Market Research. Suggestions for papers may be sent to either member of the WAPOR Program Committee: Baron K. G. von Stackelberg, EMNID, Bodelschwinghstrasse 23, Bielefeld, Germany, or Professor Morris Janowitz, Institut für Sozialforschung, Frankfurt Universität, Frankfurt/Main, Germany.

Yiddish Scientific Institute—Yivo. The Commission on Research is compiling a continuing bibliography of social scientific studies in all aspects of American Jewish life. Scholars and communal agencies are requested to forward information about recent or current descriptive and experimental studies, published or unpublished. Of particular interest are comparative studies involving Jewish and non-Jewish respondents.

The Institute announces the seventh annual Yivo essay contest for scholarly papers, of about 5,000 words, on subjects related to Jewish life in the United States and Canada. Three awards of \$300, \$200 and \$100 are offered. The contest is open to college seniors and graduate students. The closing date is October 15, 1955. All manuscripts and other communications should be addressed to the Commission on Research, Yivo, 535 West 123rd Street, New York 27, New York.

Eastern Sociological Society. The following officers have been elected for 1955-56: President, Mirra Komarovsky, Barnard College; Vice-President, Charles H. Page, Smith College; Representative to the Council of the American Sociological Society, Alfred McClung Lee, Brooklyn College; members of the executive committee, Ruby Jo Reeves Kennedy, Connecticut College; and Theodore F. Abel, Hunter College. Leo W. Simmons has been appointed to fill a vacancy on the executive committee.

At the Twenty-Fifth Anniversary Meeting, held in New York City on April 2 and 3, the first of the Society presidents—Harold A. Phelps, Frank H. Hankins, Henry P. Fairchild, Manuel C. Elmer, Robert M. MacIver, and James H. S. Bossard—addressed the Annual Dinner with informal remarks on "Sociology Since 1930." Alfred McClung Lee gave the presidential address, "The Clinical Study of Society."

The 1956 Annual Meeting will be held in New York on March 24 and 25. Papers for the program, limited to about fifteen minutes of oral presentation, may be submitted before January 1, 1956 to Professor W. C. Waterman, Department of Sociology and Anthropology, Brooklyn College, Brooklyn 10, New York.

Ohio Valley Sociological Society. The 1955 annual meeting was held at Fenn College, Cleveland, Ohio, April 29-30. Brewton Berry gave the presidential address: "The Refugee—Symbol of the Twentieth Century." Donald Young, President of the American Sociological Society, spoke informally on "Bridging Social Science and Social Practice." Newly elected officers of the Society are: M. C. Elmer, University of Pittsburgh, Presi-

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dent; Frank C. Hartung, Wayne University, Vice-President; Gerald R. Leslie, Purdue University, Secretary-Treasurer; Raymond F. Sletto, Ohio State University, Representative on Council of American Sociological Society; and Christen T. Jonassen, Ohio State University, Editor of the *Ohio Valley Sociologist*. The 1956 annual meeting of the Society will be held at the University of Pittsburgh.

The Pacific Sociological Society. The annual meeting was held in Santa Barbara, California on April 22 and 23. The presidential address was given by Charles B. Spaulding. Officers for 1955-56 are as follows: President, Joel V. Berreman (University of Oregon); Vice-Presidents, Southern, Ralph H. Turner (University of California, Los Angeles), Central, Ernest Greenwood (University of California, Berkeley), and Northern, Charles E. Bowerman (University of Washington); Advisory Council, Leonard Broom (University of California, Los Angeles), Frederick A. Conrad (University of Arizona), Harold S. Jacoby (College of the Pacific), Carlo L. Lastrucci (San Francisco State College), and Charles B. Spaulding (University of California, Santa Barbara); Secretary-Treasurer, Frank Miyamoto (University of Washington); Representative to the Council of the American Sociological Society, Ray E. Baber (Pomona College); Editor, Vernon Davies (State College of Washington).

The Southern Sociological Society held its Eighteenth Annual Meeting in Nashville, March 31-April 2, 1955.

H. C. Brearley gave the address at a memorial service for Howard W. Odum.

The members of the Society participated in the Fisk University dedication of Robert E. Park Hall, at which E. W. Burgess was the principal speaker. An address by Morris Ginsberg of the London School of Economics on "Moral Bewilderment" and the Presidential address by Morton B. King, Jr. on some "Comments on Concepts" were delivered at the annual dinner.

Officers for 1955-56 are: President, Irwin T. Sanders, University of Kentucky; President-Elect, Homer L. Pitt, Louisiana State University; First Vice-president, Mozell C. Hill, Atlanta University; Second Vice-president, Preston Valien, Fisk University; Secretary-treasurer, A. L. Bertrand, Louisiana State University. John N. Burrus, Mississippi Southern College, and Rollin Chambliss, University of Georgia, were elected to serve three-year terms on the Executive Committee. Continuing as members of the Executive Committee are: Haskel M. Miller, University of Chattanooga; C. A. McMahan, O. E. R. L. Maxwell Air Force Base; Meyer F. Nimkoff, Florida State University; and Joseph F. Himes, North Carolina College. Continuing as the representative to the American Sociological Society is William E. Cole, University of Tennessee.

Barnard College. Bernard Barber has been promoted to Associate Professor.

Gladys Meyer is serving on the Executive Board of the Conference on Functional Education.

Richard Brotman of City College will direct a

field work course on "The College and the Community" in the coming year.

Herbert Hyman, Associate Professor of Sociology at Columbia University, will teach a course on methods of sociological research during the coming year.

Renée Fox, Research Associate of the Columbia Bureau of Applied Social Research, has been appointed lecturer.

Boston University. Albert Morris, Chairman of the Department of Sociology and Anthropology, was appointed University Lecturer for 1954-1955.

University of Bridgeport. Abraham E. Knepler, Associate Professor of Sociology, has returned to the department after a semester's leave of absence on a Study Award of the Fund for Adult Education, for work in community organization and adult education.

The University of Buffalo. Milton C. Albrecht has been promoted to Professor of Sociology and Anthropology.

The Catholic University of America. Hugh E. Brooks and Franklin J. Henry have been awarded a grant by the Milbank Memorial Fund for a study of Catholic fertility, social mobility and intensity of religious practice.

Central University of Venezuela. George Sugarman from the American University of Washington, D. C., has joined the staff of the new Department of Sociology and Cultural Anthropology to handle courses in the field of Public Opinion and develop research in this area.

Paul H. Landis was sponsored by the Department before the fifth annual meeting of the Venezuelan Association for the Advancement of Science in February. He presented a paper on "Social Change in the Modern World." George W. Hill chaired the panel and responses were made by J. L. Salcedo Bastardo, José Ramón Medina, Rafael Caldera, and Norman W. Painter. James Silverberg presented a paper in the Anthropological section of these meetings on "Field Methods Which We Ought to Emphasize in Venezuelan Social Anthropology."

Norman W. Painter is dividing his time this year between teaching duties at the University and as consultant on industrial relations with the Creole Petroleum Corporation with emphasis on worker-management relations at the Amuay Refinery.

The Department plans for the coming year to establish student assistantships in both teaching and research activities. For information address Professor George W. Hill, Chairman, Department of Sociology and Cultural Anthropology, Universidad Central de Venezuela, Caracas, Venezuela.

Cornell College (Iowa). J. Harold Ennis, Head of the Department of Sociology, has returned to his teaching duties after having spent the first semester on a sabbatical leave.

Haridas T. Muzumdar, Professor of Sociology and Social Work, has been chosen as a Co-ordinator of the North Central Association. Dr. Muzumdar has also been elected President of the Conference

on Asian Affairs, which will hold its fourth annual sessions in the fall at Kansas State College.

University of Kentucky. Irwin T. Sanders visited Greece on a special assignment to evaluate the program of the American Farm School in Salonika. He also visited Yugoslavia in his capacity as Editor of the Yugoslav handbook of the Mid-European Studies Center series.

The background papers of a seminar on Collectivization in Eastern Europe, held on April 14-16, will be published by the University of Kentucky Press under the editorship of Irwin Sanders.

J. W. Gladden, associate professor of sociology, has been named to the National Advisory Board of the Student Y.M.C.A. for a three year term.

Earl Mayhew, retiring state director of the Farmers Home Administration in Kentucky, has joined the staff in rural sociology.

Ralph J. Ramsey returned to his work as extension specialist in rural sociology, after a sabbatic year of advanced study in adult education at the University of Chicago.

C. Arnold Anderson, professor of sociology, has been on sabbatical leave at the University of Lund, Sweden.

University of Massachusetts. Arthur Jordan Field has been appointed Instructor in Sociology.

University of Miami. The Department of Human Relations sponsored a six weeks summer Workshop on Theory and Practice in Human Relations.

Dean George Epley, Chairman of the Department of Human Relations, was formerly at Memphis State College.

University of Michigan. Amos H. Hawley has been reappointed as chairman of the Department of Sociology for a five-year term.

Robert C. Angell is offering a new course in "Analysis of Social Problems" to form a sequence with the "Principles of Sociology" course.

Angus Campbell gathered interview data from a national sample during the 1954 election campaign in order to follow up on his study of voting behavior in the 1952 presidential election.

Rensis Likert has been named President and Angus Campbell one of the Trustees of the Foundation for Research on Human Behavior, a new organization with headquarters in Ann Arbor which encourages and sponsors research in such areas as leadership, communication, and human relations in organizations.

David Aberle will spend the year 1955-56 at the Center for Advanced Studies in the Behavioral Sciences. Replacing Dr. Aberle will be Theodore Schwartz from the University of Pennsylvania.

Harold L. Wilensky of the University of Michigan and Charles Lebeaux of Wayne University have received a summer grant from the Russell Sage

Foundation to prepare a resource document for the U. S. Committee of the International Conference of Social Work. The topic is the "Impact of Industrialization on the Development and Character of Social Work in the United States."

Ronald Lippitt has received a grant from the Russell Sage Foundation to make a comparative theoretical analysis of methods of bringing about change used by psychotherapists and by leaders in small groups, organizations, and communities.

Robert Blood and Morris Axelrod are studying the Structure and Functioning of Urban Families through the facilities of the 1954-55 Detroit Area Study. Dr. Blood has received a grant to make a similar study of farm families.

The Detroit Area Study now provides research training in lieu of the M.A. thesis not only for all first year graduate students in Sociology but for those in Psychology who plan to enter the doctoral program in Social Psychology.

Tulane University. Oswald Hall, McGill University, will serve as Visiting Professor for the academic year 1955-56.

A research team, under the direction of John H. Rohrer and including Forrest E. LaViolette, Thomas Ktsanes and Virginia Ktsanes, is completing a community study dealing with evacuation preparedness for the Federal Civilian Defense Administration with Mobile, Alabama, as the test city.

Robert C. Stone is making a comparative study of two factories, illustrating each with cases of occupational careers.

William L. Kolb has completed a monographic history of value theory in American Sociology since World War I.

The culture and personality group making a re-study of "The Children of Bondage" has added Sumner Ives, associate professor of English, to make a linguistic analysis of the dialects of Negroes at different class levels.

Arden R. King has prepared a list of Latin American area specialists for the Yale Human Relations Area Files. Robert Lystad prepared a similar list for Africa.

Munro S. Edmonson and Warren Breed are conducting a quantitative study of kinship structure in the New Orleans area, primarily to test the Parsons symmetry hypothesis.

Elwin H. Powell, former graduate student, is acting assistant professor at the University of Tulsa.

University of Southern California. Meyer F. Nimkoff, Florida State University, and Wellman J. Warner, New York University, served as visiting professors during the 1955 summer session.

University of Virginia. Eric R. Wolf, Ph.D., Columbia, has been appointed Assistant Professor of Anthropology. The department of sociology has become the "Department of Sociology and Anthropology."

BOOK REVIEWS



Voting: A Study of Opinion Formation in a Presidential Campaign. By BERNARD R. BERELSON, PAUL F. LAZARSFELD, AND WILLIAM N. MCFEE. Chicago: The University of Chicago Press, 1954. xix, 395 pp. \$7.50.

This is the Elmira Study, the second major project by the Bureau of Applied Social Research at Columbia University on "votes in the making" during Presidential campaigns. The first was the well-known Erie County, Ohio, Study of the 1940 election, reported in *The People's Choice*. The present research investigated the 1948 Presidential election in Elmira, New York, a community of about 65,000 that possessed characteristics desired for the purposes of the research. An atypical condition was its Republican tradition, 61 per cent of the two party vote being Republican in both 1944 and 1948, but the authors justify their choice of Elmira despite this bias on the ground that the community was "abnormally" for one party in the 'normal' sectional tradition of the United States" (p. xi).

The Elmira Study invites comparison with the Erie County project for the later study was modeled after the earlier one and was intended to replicate, deepen, and improve upon the previous analysis. As before, the inquiry focused on the process of opinion formation during the campaign period, particularly the influences which stabilize opinions or cause them to change. In order to trace this process, panel interviewing—repeated interviewing of the same subjects—was again used, on this occasion with a single probability sample of one thousand that was interviewed four times, the first time in June and the last in the immediate, post-election days. Almost all the analyses of the data were again simple and straightforward, but insightful, percentage comparisons within association tables, with the findings typically presented in numerous bar diagrams and trend charts.

Voting may seem superficially to have a different content than *The People's Choice*. For one thing, the style is different; the writing is now fluid and the transitions well-rounded by contrast with the arresting, staccato exposition of the earlier work. The organization of the material is now more systematic, although the conceptualization is somehow not as sharp or vivid, but the latter may be due to the difference between the excitement of discovering a

mine and the soberer task of working it. Following an introductory section on the social and political background of Elmira, the main body of analyses is contained in Part II on "Social Processes" with chapters on the social institutions, differentiation, perception, processes, and effects of the campaign, and in Part III on "Political Processes" with a parallel arrangement of chapters on the political institutions, differentiation, and so on. (The first chapter in each part is contributed by John Dean and Edward Suchman.)

Cutting through the superficial differences, however, one finds essentially the same framework of ideas in *Voting* as in the earlier work. At Elmira, certain status identifications of the voter, notably, socioeconomic status, religious affiliation, and ethnic background are again revealed as prime determinants of political orientation, although the interplay of these variables with the effects of political generations produces modifications. The influence of the status characteristics is magnified by a perceptual distortion in which voters see their own status groups as more like themselves in opinion than they actually are. These characteristic political orientations of the status groups are transmitted and maintained through the network of personal associations entered into by their members. For in both their primary group as well as larger associational contacts, the voters tend to find themselves, or place themselves, in groups which are homogeneous in status characteristics and compatible politically. The result is a monopolistic learning environment for the novice voters and a climate of opinion that is largely reinforcing for the old hands. Those whose status identifications or group contacts are politically inconsistent—those under "cross-pressure"—show the greatest instability of opinion, and for them the authors trace out a complex process leading to vote determination.

As for the political campaign, a process of selective attention operates, guided largely by the basic status identifications of the individuals, such that the voters expose themselves and accept points of view which are consistent with their background, or distort perceptions toward consistency when the objective facts are inconsistent. For example, with regard to the manifold issues aired in the 1948 campaign,

Democrats and Republicans showed a surprising amount of agreement on many issues, but split on the two most closely related to their status interests, the Taft-Hartley Law and price control. Again, applying the hypothesis of selective attention, the authors are able to explain a trend toward Truman that developed in the late phase of the campaign, the failure to take account of which contributed to the pollsters' "scandal of 1948."

Voting, however, is not an unimaginative reworking of an old field. Hypotheses in the earlier study which were sometimes scantly supported by evidence are better documented, and often there is considerable elaboration of the older hypotheses. Only one or two examples of these elaborations can be briefly indicated here. The notions of personal influence and opinion leaders which were suggested in the earlier work and loosely documented are now much more fully discussed and supported by data on a minimum of twenty-one hypotheses. These hypotheses bear on the political homogeneity of the small groups in which personal influence is exerted, the nature of the political discussions in these groups, and the characteristics of the opinion leaders in these groups. Again, in the chapter on political differentiation, a rare discussion of a type of political issue is introduced that has long been wanting in public opinion analysis. Many other such extensions of hypotheses occur throughout the work.

The concluding part consists of a chapter on "The Social Psychology of the Voting Decision" and another on "Democratic Practice and Democratic Theory" which seek to relate the findings of the study to social psychological and political theory, respectively. These are stimulating chapters, but there is perhaps a tendency here to equate opinion formation in a Presidential election with public opinion processes generally. Presidential elections constitute an important but unique type of public opinion situation. There is about them an unusual degree of institutionalization—by tradition, the electorate agrees to disagree every four years. One wonders, for example, whether the stability of opinions which characterize the majority of voters in these studies is not a reflection of this institutional element in elections, and whether such stability would occur when the issue before a public is not couched within a body of traditions. The fault, if it occurs, is there only by implication, and we may well be reading in more than is there. If so, the foregoing comments should rather be addressed to readers who may be tempted to see implications which were not intended.

In this reviewer's opinion, these studies on voting behavior by the Bureau represent out-

standing contributions to the fields of public opinion and sociology. In these works, theory and research are related in a way that is unfortunately rare in sociology today. There is much to be learned from them on the art of asking the right questions. And they have contributed heavily to an accumulation of tested hypotheses such as is scarcely to be found in other areas of social research. In the appendix, the authors present a fifteen-page table listing 209 generalizations on voting behavior which have been investigated in one or another of fourteen similar election studies (including studies by NORC, the Michigan Center, and others) and frequently have been verified by several. This summary alone constitutes a noteworthy contribution to the field of public opinion.

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S. FRANK MIYAMOTO

Sampling Techniques. By WILLIAM G. COCHRAN. New York: John Wiley and Sons, Inc., 1953. xiv, 330 pp. \$6.50.

The future of sociology will be affected profoundly by current developments in the use of sample surveys for research purposes. They will give us data in increasing volume about family life, social communication, prevalent beliefs, group participation, conformity to social norms, community organization, stratification, mobility, and the whole range of sociological processes. They will enrich with significant detail the body of data available for analysis and hasten the rate at which theory is put to the test. They will free us from some of the idiosyncrasies of studies confined to a single locality or to a particular instance. Sampling surveys avoid some of the cumbrousness of a complete canvass of a population. They can bridge the great gulf between case studies and censuses when research problems require both intensive study of details and thorough coverage of the variety of individual instances in a large population. They enhance the accuracy of data and reduce its cost.

Should we not then rejoice? Are not our burdens lightened and our troubles cast away? Yes, indeed, though we must make some reservations. Sampling will not produce miracles. When it is not done well it may lead to disaster and even when it is done very well there will still be failures due to other parts of the complex procedure by which the data we need are produced. We must make comparable advances in the formulation of research problems, in the processes of interviewing and measuring, and in the analysis and interpretation of the results if the potential benefits of modern sampling

methods for the enrichment of sociological research are to be realized.

Even in the case of the sampling part of the production of data it is necessary to make some reservations. Just as the bliss of ignorance in the Garden of Eden gave way to pain and toil when the fruit of knowledge was eaten, so too sophistication about sampling carries with it a burden in the necessity of learning some mathematics. Fortunately for sociology there are quite a few students and younger sociologists who have learned all the mathematics that is necessary for a good understanding of sampling methods. Many of them have not found it at all arduous or unpleasant. In addition there is a growing group of sampling experts who are available for advice to their sociological colleagues and whose writings are helping to extend both professional and public understanding of the major facts about sampling. There is a trend toward including in survey reports an adequate description of the sampling procedures that have been used and estimates of the effect of the sampling on the accuracy of the results. The latest textbooks and other publications are taking cognizance of sampling and discussing it more effectively. In these ways sociologists and their fellow social scientists are being prepared to do good sampling and to use the results of sampling surveys with skill and understanding.

Most of the modern developments in sampling surveys have come to sociology from other fields, particularly from agricultural research, from mathematical statistics, from industry, and from both public and private survey organizations. Sociologists and social statisticians have made their contributions too. For example, the establishment of the research program in the Census Bureau, one of the major centers for the development and application of modern sampling methods, was in large measure the work of sociologists like Rice, Dedrick, Stouffer, and Hauser working with mathematical statisticians like Deming, Hansen, Hurwitz, and Madow and with their colleagues in both professional and administrative positions in the Bureau. Since sociology has so much to gain from sampling surveys and has had a great part in their development, we welcome Professor Cochran's excellent exposition of the sampling techniques.

This book sets a standard of excellence in sampling procedure in company with the volumes by Yates, by Deming, and by Hansen, Hurwitz and Madow. It is written very sensibly and with great technical skill. It is not a manual on how to "do it yourself". It does not treat a great many aspects of survey practice of the kind that are considered in detail in books by

Parten, Festinger and Katz, or Jahoda, Deutsch and Cook. None the less there is a fundamentally practical purpose in its thorough application of statistical theory to such problems of technique as the selection of units of sampling, modes of stratification, methods of estimation and methods of determining sampling variation or "error". It shows how these technical problems can be solved economically and efficiently. It evaluates the risks of difficulty from the use of biased methods of selection and estimation. It does not neglect errors of measurement and their effect on the results. Minor problems are not dismissed casually if there is a possibility that they will at times be of major importance. The aim of the theory and its applications is to predict how a given plan of sampling will work out in practice. It is therefore of great value beyond the field of statistical methodology both for teaching and for research.

Among the phases of sampling technique that are distinctively modern are: explicit treatment of finite populations in the theory, thorough analysis of the choice of sampling units, development of more flexible and complex designs, such as those based on subsampling or double sampling, analysis of systematic sampling, and comparison of ratio and regression estimates. It is not merely these topics but the coherence of the whole and the utilization of mathematical statistical theory to master many important details that makes this a major advance over the discussions of sampling that were available a generation ago.

Since this book was not written primarily for sociologists it would be out of place to discuss at length the questions of statistical theory that are treated or to criticize it for what it neglects among the sociologists' survey problems. One should not go to it expecting to find the kind of instructions that one would find in a manual. It does not give one a quick answer to the perennial question "How large a sample must I have to get statistically significant results in my project?" (There is no royal road to the answer to this question.) It says nothing of sampling for content analysis and does little about the sampling of individuals in a household. However, many of the principles of statistical theory that are applied to surveys can be adapted to these other problems.

Cochran very properly points out the dangers in the common tendency to develop sampling rules that become entrenched in practice and are then applied to problems for which they are not appropriate. It is prudent to return to the theoretical basis of the rules from time to time or whenever the research problem is

fundamentally different from those for which the rule was developed.

An interested and careful reader can gain a great deal from reading parts of this book but he will not go very far without a good working knowledge of elementary algebra, including the use of summation signs, and also elementary mathematical statistics. The book does not progress in difficulty to the same extent that a mathematical textbook does but it does progress somewhat in complexity. The keen edge of the author's use of mathematics is nicely tempered by his sense for the practical considerations that are an integral part of sampling problems. This book is a very fine textbook for a course on the statistical theory of sampling surveys. For broader courses on research methodology it is a major reference. It is one of the examples we can give to graduate students of books that reward them well for learning a modest amount of college mathematics. We will be fortunate if other techniques that are important in sociological research are soon brought to a comparable level of development under the guidance of practical sense and good theory.

FREDERICK F. STEPHAN

Princeton University

Clinical versus Statistical Prediction. By PAUL E. MEEHL. Minneapolis: University of Minnesota Press, 1954. x, 149 pp. \$3.00.

This book will be of considerable interest to those who can remember the debate a few decades ago in sociology over the relative merits of case study versus statistical methods in research, and the part this played in the separation of sociology from social work in the organization of universities. The present controversy is almost an intra-family affair of psychologists with T. H. Sarbin and G. W. Allport occupying the polar positions once held in sociology by Lundberg and Sorokin regarding the outlook for valid statistical prediction.

The author's efforts to provide an objective appraisal of the claims made by proponents of the two types of prediction will probably please neither camp. It is evident that Meehl is admirably equipped to evaluate the differing points of view, since he has had extensive clinical experience and has demonstrated marked competence in statistical research. In one of his most interesting chapters, he seeks to analyze the nature of clinical intuition, and of the other intellectual processes by which the clinician arrives at his degree of confidence in his diagnosis and prognosis. He cites instances of such intuitive perception based upon sensitivity to cues in the clinical behavior of patients, and

upon interpretation of behavior having symbolic significance. A limitation of these instances is, of course, that they could so readily be matched by examples of erroneous inferences resting upon the same bases.

What is manifestly required is systematic comparison of the validity of predictions made on the same cases by the two methods. The author reviews the findings in nineteen such studies where such comparisons are possible. In fifteen of these, he concludes that the evidence indicates that statistical predictions are at least as effective as those made by clinicians, in three they are definitely superior, and in only one is there an indication of superiority of the clinical predictions. Even in this one study the superiority of the clinical method is questionable, since clinical predictions were not made on all of the cases for which there were statistical scores, nor upon a random sample of them. These studies related to academic performance, recidivism among mental patients, and among prisoners released on parole, and to marital outcomes.

While the weight of this evidence presently favors statistical prediction, it is rather unlikely that proponents of clinical prediction will be convinced that a statistical schedule, scored by a clerk, can yield as valid prognoses as can be gained by clinical methods, particularly in cases where the clinician has more than average confidence in his prognoses. Variation in clinical approaches and methods, and variable competence among clinicians are factors that may be cited as grounds for not accepting a generalized conclusion from the evidence, as it has been presented in the studies summarized by Meehl.

As a way to conserve scarce clinical skills for other tasks, since prognosis is only one of many valued functions performed by clinicians, Meehl favors the use of statistical methods of prediction where the evidence indicates that they are equal or superior to clinical predictions. Such a resolution of the problem would perhaps not be possible for many clinicians, particularly since clinical experiences almost inevitably lead to judgments as to outcome, and frequently to such prognoses accompanied by a degree of confidence not easily shaken by its inconsistency with a statistical score. Acceptance of the statistical prediction would presumably be easiest for the clinician when it corroborated his subjective estimate.

Readers interested in the sociology of occupations may find this book helpful in understanding the present status of psychology as an academic field and as an applied profession. The dictum that history repeats itself may have relevance if one compares recent developments

in psychology with what happened in sociology in the 1920's. The rapid growth of clinical psychology as a profession since World War II has had effects upon psychology departments much like those experienced by sociology departments after World War I, as a consequence of the large influx of students headed toward the rapidly expanding profession of social work. Such considerations raise the question whether the present controversy in psychology is a result of the change in the composition of its membership. Perhaps the advocacy of one method or the other is less indicative of differential experience than of differential occupational aspiration, less indicative of either than it is of basic personality differences in the realm of life philosophies and values. If so, can research resolve the problems of this occupation?

RAYMOND F. SLETTA

The Ohio State University

Statistical Methods for the Behavioral Sciences.

By ALLEN L. EDWARDS. New York: Rinehart and Company, Inc., 1954. xvii, 542 pp. \$6.50.

In terms of level of treatment, this would be an ideal textbook for most statistics courses (beginning and a bit advanced) for sociology students. A minimum amount of mathematical knowledge (high school algebra) is assumed, and a very adequate chapter reviews these minimum mathematical essentials for all that follows. Dealing with statistics on this level unavoidably results in the appearance of an unrelated set of miraculous conceptions, but Professor Edwards seems not unaware of this and does as much as can be expected within the given mathematical restrictions to emphasize the interrelationships of various statistics and to give the student some small appreciation of their development. Many problems for the student, with answers to all in the back, are provided at the end of each chapter; and illustrative problems within each chapter are carefully worked in considerable detail.

Unfortunately, in terms of content, this text has the usual shortcomings for use with sociology students. The emphasis is overwhelmingly on statistical methods for scores on tests. Until the student is half through the book he would not know that there are dichotomous variables in the world; and even then such variables are formed from essentially continuous variables. There is one skimpy chapter on probability and the binomial distribution and one equally skimpy chapter on the chi square test of significance, and that just about exhausts the treatment of qualitative data.

The two chapters on analysis of variance are good as far as they go, and there is an ex-

cellent discussion on comparison of individual means; but the treatment is simply not geared for use in sociological research. For example, no consideration is given to design in which the individual units of observation are not randomly assigned to the sub-groups, sub-groups are unequal in size, and the appropriate error variance estimate for a test of the significance of the difference between columns or rows is that based on the interaction sum of squares, i.e., an analysis of variance into four components. A really excellent chapter on significance tests for ranked data is unhappily tied completely to judges' ratings.

The author has an earlier statistics text explicitly addressed to students in psychology and education. This volume, despite its title, is addressed to the same students.

DAVID GOLD

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Conflict. By GEORG SIMMEL. [Translated by KURT H. WOLFF.] *The Web of Group-Affiliations.* By GEORG SIMMEL. [Translated by REINHARD BENDIX.] With a Foreword by EVERETT C. HUGHES. Glencoe, Ill.: The Free Press, 1955. 195 pp. \$3.50.

This book presents translations of two chapters of Simmel's *Soziologie: Der Streit* and *Die Kreuzung sozialer Kreise*. The translations seem to have been taken from different editions of the *Soziologie*. They are a welcome edition to the sociology of Simmel in English.

What these two essays have in common is a recognition of the variety of influences that simultaneously unite and divide people. Even in erotic relations, Simmel asks, as did Freud and, long before Freud, Catullus: "How often do they not strike us as woven together of love and respect, or disrespect; of love and the felt harmony of individuals and, at the same time, their consciousness of supplementing each other through opposite traits; of love and an urge to dominate or the need for dependence." (p. 22) In *Conflict* Simmel talks about the sources of hostility and their relation to the overt reasons for conflict ("It is expedient to hate the adversary with whom one fights for any reason"), about the types of conflict, paying particular attention to competition, about the relation between conflict and the ties uniting groups and individuals—the very strength of the forces uniting the members of some groups allows rather free expression, in some fields, of the antagonisms between them—about the effect of inter-group conflict on the internal structure of a group, and about the various means of ending or resolving conflict. He shows

how reconciliation may render even stronger a broken relationship, "where the measure of the intensity of the reconciled relationship grows beyond that of the unbroken one. The chief characteristic is the fact that the breach has created a background against which all values and all perceptions of the union now stand out more consciously and clearly." (p. 120.)

The Web of Group-Affiliations considers the implications of the fact that a person in any society usually is a member of more than one group: that he stands at the intersection of a number of social "circles"—hence the German title. In primitive societies, for instance, Simmel shows how patrilineal groups may be linked together because each of their members also belongs to other, cross-cutting, groups: matri-lineages, age-grades, sex divisions. He also shows how some groups have felt these cross-cutting ties to be a danger to group unity and have insisted that membership in other groups be given up. This was characteristic of some medieval guilds. The same result can be achieved if the family group, for instance, can have its ties limited to other families belonging to the same larger group. This is one of the sources of caste endogamy. On the other hand, the strong emphasis of a single group membership above all others may allow a man "to come into contact with any number of other groups" just because he has broken his ties with those he was born into. The celibacy of the Catholic clergy sets them free to be all things to all men.

Particularly interesting is Simmel's discussion of the relation of concepts to the formation of groups: how slow the concept of "the wage-laborer" or "worker" was to arise, and how important it was in the development of what we should now call industrial unionization. Or again, his discussion of the evolution of "external" as opposed to "rational" criteria of group membership. In medieval parliaments, the different estates met separately. Within each estate, members were considered equals ("peers") and shared similar backgrounds and interests. This division was, in Simmel's terms, a "rational" one. Modern parliaments and congresses are made up of representatives elected by persons of different backgrounds and interests living in a particular area. This is for Simmel an "external" form of grouping, but in his view it is not for that reason less valuable for a society. "Electoral procedures based on territorial units are more mechanical, to be sure, but the exclusively local election need not necessarily mean the representation of exclusively local interests. Indeed, this is precisely the technique for the organic integration of the whole." (p. 194.) Or, representative govern-

ment is less effective if the representatives need take account of only one interest, and "corporative" representation less integrative than territorial, with all its drawbacks.

The sociologist will find here more of what he has learned to expect from Simmel. He will find a formal sociology, in which general types of relationships are considered in abstraction from their concrete manifestations. Thus it is the nature of conflict he is interested in, whether it arises between two individuals or between two groups. But he takes the curse off abstraction by his wealth of illustration: from everyday social experience, from primitive and modern societies, and from social history, where the American sociologist, unfortunately, is ill-equipped to follow him. Like other sociologists of his time, he sometimes suffers from an inadequate anthropology: he believes in the existence of matriarchy and says of Australian aborigines: "Those wretched people are quite incapable of engaging in rational collective action, properly so-called." (p. 133.) Even so, he says several things about what holds primitive societies together that are well in advance of his contemporaries. Reading Simmel, a sociologist will not find propositions whose truth is supported with adequate evidence. He will find instead the quality of a man of the world, a perceptiveness and awareness of the ambiguities and complexities of social behavior as directly experienced that makes Simmel's writings infinitely suggestive. He is the Proust or Henry James of sociology, and I suspect he would have been a more amusing man to talk to than Durkheim, Weber, or Pareto.

The translations seem excellent and suggest that Simmel wrote, by the standards of English prose, better German than did Weber. The Foreword by Everett Hughes takes the same attitude towards Simmel that I do myself. It is therefore sound and urbane.

GEORGE CASPAR HOMANS

Harvard University

La musique, la radio et l'auditeur: étude sociologique. By ALPHONSE SILBERMANN (avec la collaboration du Centre D'Études Radio-phoniques). Paris: Presses Universitaires de France, 1954. 229 pp. 800 F.

If society exists by communication which becomes formalized and integrated into generally accepted norms of behavior, then any mechanism which modifies those processes of communication must be of interest to the student of society. Such inventions as writing, the printing press, new means of transportation, and the radio have all been potent factors in extending the radius of communication from

intimate face-to-face groups to the area of the "great society." The social effects of such impacts on the social organism have been to increase the velocity of the circulation of ideas, to envelope increasingly heterogenous groups, to render occupations obsolete, to change the manner of commercial emolument, to increase anonymity, and thus to create new adjustments in the folkways of law, etiquette and morality, and in general to accelerate social change. Hence every new invention of sufficient potency tends to evoke a sociology of it. This is the broad frame of reference of this book.

To the abstract sociologist, it is purely incidental that its subject matter is concerned exclusively with music broadcasts. An American who may read this interesting volume should furthermore keep in mind that the radio in Europe is a public utility, supported as a government monopoly by public taxation. This circumstance creates a different milieu for sustenance and growth than does the American social soil of commercial sponsorship by private enterprise and the profit system.

This is not a book that many might have been led to expect from the title. It contains practically no statistics on audience polls "which in America are rendered possible by its enormous financial resources" (p. 23); no alarmist cries on the debasement in "mass culture;" nor yet a synoptic discussion of the impact of the radio on musical culture. It is rather a theoretical treatise on the concepts and assumptions that may be considered basic to a practical governmental policy in the administration of radio music programs. The study, in fact, was undertaken at the behest of the Study Center of the French Radio.

The author takes his point of departure from the social configuration of music-radio-audience, which must be viewed as an interacting unity. The official administrators of this social trilogy must not play the role of ethnocentric propagandists for "high art" (this is a criticism of the current French practice of exclusively professional boards), nor yet of mass egalitarians, nor unenlightened experimenters, nor complacent bureaucrats of a calcified social system which resists change. They should be scientific functionaries who carry on a continuous analysis of the socio-economic, geographic, and cultural characteristics of their actual and potential audiences. In harmony with this view, the author recommends that a sociological consultant be added to the staff.

The author points out that the music audience has undergone a radical transformation during the last 150 years. From the courtly salon, in which the musicians were servants and the audience a small gregarious and intimate

group, it shifted to the concert hall and became large and anonymous. Today, with the radio, the audience has become widely diffused and fragmented. The functions of the "concert" have accordingly assumed new definitions, "depending upon in which room the radio is located." The concert may range from a pleasantly distracting noise, to which the auditor listens while he works, to a serious intellectual enterprise in the salon. In the course of this history, the "distance" between the music and its audience has been increased. (By "distance" the author means "social and psychic participation.") This is a result not only of the remoteness of the concert, but also of the fact that the radio, which is a "socio-cultural institution," must incorporate into a centralized unit an increasingly heterogeneous series of groups, without displaying partisanship. To the extent that radio becomes the prevalent mode of dissemination of music, a concert in the Salle Pleyel of Paris (or Carnegie Hall of New York) may seem as primitive, wasteful and anachronistic as a Town Meeting would be today. We have already begun to compose "radiogenic" music (p. 77). Certainly many of the older social assumptions are no longer valid.

This book, as may be discerned, is not a monograph in the typical sense. It is a survey of thought—theoretical and practical—on the sociological issues which emerge in the public administration of a social utility. The documentation of studies made in Europe and America is immense. This reviewer was amazed at the author's familiarity with even the more recondite articles and reports published in practically every country of western civilization. Of course, a sophisticated sociologist may easily persuade himself that there is nothing fundamentally new, while at the same time tacitly appreciating the exposure of new facets of a problem that is, after all, rather familiar to us all.

JOHN H. MUELLER

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Schools in Transition: Community Experiences in Desegregation. Edited by ROBIN M. WILLIAMS, JR., AND MARGARET W. RYAN. Chapel Hill: The University of North Carolina Press, 1954. xiii, 272 pp. \$3.00.

Prepared for the informed citizen, this work is not written in technical sociological or psychological language. The reports, based on data collected by research teams, deal with many of the aspects of desegregation in twenty-four communities in six states bordering the South which have been moving from racial separation toward integration in the public schools. This

volume, together with Harry S. Ashmore's *The Negro and the Schools*, and others which will follow, are parts of a project sponsored by the Ford Foundation for the Advancement of Education.

In the six states considered here, desegregation was required by law in Ohio, Indiana, Illinois, and New Jersey; desegregation was permitted but not required in Arizona and New Mexico. These studies range from the gradual approach of Cincinnati to an about face and complete change in Phoenix, Arizona and Mount Holly, New Jersey. In two of these communities, Hobbs and Clovis, New Mexico, no attempts at desegregation were made until May 17, 1954. The smoothness of the transition from segregation to integration surprised officials in Burlington, New Jersey, Elkhart, Indiana, and Tucson, Arizona. Of the twenty-four communities, only Cairo, Illinois experienced violence during the process of desegregation.

That school segregation is supported by the larger patterns of segregation, especially residential segregation, is indicated in the reports of Indianapolis, South Bend, Camden, and Atlantic City. Douglas, Arizona, an interesting exception in this respect, couples complete school integration with complete residential segregation. Evidently the majority of Negro children in these six states still live in segregated neighborhoods and go to separate schools, but much change has occurred in the last decade.

The personal attitudes of administrative officials and of school board members are important in desegregation programs. In Tucson, Camden, Atlantic City, and Burlington, New Jersey, careful planning and firm stands by superintendents greatly facilitated desegregation. Camden encouraged faculties and administrative officials to take special training in inter-group relations. In Salem, New Jersey, a city of 9,000 where there are no school districts and no segregated residential patterns, each teacher drew her quota of students by lot and no transfers were allowed. Williams and Ryan conclude that in the communities observed a complete change carefully planned worked out more harmoniously than the piecemeal approach.

On the whole, relations between Negro and white students have been satisfactory in integrated high schools in such cities as Atlantic City and Cincinnati, but school officials in both places have noted that separation has characterized undirected leisure activities. Elsewhere, after several years of desegregation, community attitudes regard integration as normal and integrated extra-curricular participation has increased. In Gary, the school board persuaded

the leaders of the student strike of 1945 to change their demands from complete exclusion to complete inclusion of Negroes. Although districting usually favors segregation, the opposite principle promoted segregation in some Atlantic City elementary schools. "School of choice," provided there was room, resulted in the retreat of many white students to more distant schools with a lower ratio of Negro students. When desegregation began in Cairo, Illinois, no upper and upper middle class Negro families requested transfers for their children; Negro teachers, principals, ministers, and policemen, as well as the white residents, favored the maintenance of the dual school system. Despite delays and complications, desegregation did occur, but the "integration" of Negro students in this community has not yet gone much beyond that "of physical occupancy of space within the schools." In Indianapolis and elsewhere, some Negro students have not felt comfortable in desegregated schools and have asked for transfers back to separate schools. Due seemingly to the larger pattern of segregation and discrimination in the town, there were more Negro students in the New Albany, Indiana high school before than after desegregation. Camden, New Jersey found it was easier and simpler to move Negro students and teachers into schools formerly used for whites than vice versa.

The New Jersey experience generally did not sustain the fears that in desegregation Negro teachers would be eliminated or relegated to undesirable posts. In Atlantic City, Negro teachers have been promoted to positions for which they are qualified regardless of the racial composition of the classes. An acute teacher shortage at the time Camden desegregated proved advantageous to qualified Negro teachers who previously had not been accepted. In Elkhart, Indiana, Negro teachers were immediately and completely accepted in schools which were predominantly white, but in Jeffersonville, Indiana, integration seems to have eliminated teaching as a career for Negroes.

In most of the cities studied, integration in the schools has been too brief to indicate its effects on other aspects of community life, but the editors note somewhat greater participation of Negroes in integrated PTA's, school boards, and other community activities.

These studies present a revealing picture of the attitudes and actions of school administrators, teachers, and boards, of parents, students, and the local citizenry in communities outside the deep South which have recently changed from segregated to desegregated education.

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International Migrations: The Immigrant in the Modern World. By DONALD R. TAFT AND RICHARD ROBBINS. New York: The Ronald Press Company, 1955. viii, 670 pp. \$7.00.

This is a significant book—in the reviewer's opinion the most comprehensive and up-to-date treatise of human migration from the international point of view. The last mentioned characteristic should be stressed. Most American writers on immigration have treated the subject only from the American standpoint. Though the United States has been the greatest immigrant-receiving country, immigration is a world problem and even the role of the United States takes on deeper meaning when viewed from the international standpoint. The senior author of this volume and the present reviewer were the first American sociologists to present this approach, publishing, respectively and simultaneously in 1936, *Human Migration* and *World Immigration*. The present volume is much more than a revision of Taft's *Human Migration*. It is a new treatise under joint authorship, whose scope is best indicated by considering in turn the four parts into which it is divided.

Part I, Elements in the Migration Process, treats not only of the history and statistics of world migration but the major factors associated with the movement of peoples—what the authors term processes; namely, population pressures, economic motivations and effects, race attitudes, nationalism, and culture conflict and acculturation.

The term "process" as used here and in the titles of the next two parts, as well as throughout the text, strikes the reviewer as being somewhat unnecessary and strained. However, Part II, Processes in the International Arena, is an excellent account of world migratory movements from World War I to the present. Here are vividly portrayed the effects of war and totalitarianism and persecution, on a scale previously unmatched, on the volume and characteristics of migration. Emigration overseas dwindled in comparison with mass movements within Europe and Asia. This is the story of displaced and uprooted people, of refugees and stateless persons, of exchanges of population and deportations. It would seem that forced migration has become the order of the day. These basic problems and trends are fully and brilliantly analyzed, and the necessity of multilateral international assistance and control clearly indicated. There is also discussion of the increasing importance of new destinations besides the United States—particularly Israel and the British Commonwealth—for refugees and "surplus workers" of Europe.

Part III, Processes in the United States, contains a brief history of immigration to the United States and of immigration policies and laws, followed by case histories of selected immigrant groups and a discussion of the effects of immigration on the United States. Separate treatment is given to European, Asian, and Latin-American movements to this country. Throughout this section the cultural as opposed to the racial interpretation of immigrant traits and the effects of immigration on American society is given, and a strong stand is taken against the racial and other discriminatory provisions of our immigration laws. As to the question of assimilation, cultural pluralism is taken as the answer.

The final and briefest section, The Larger Meaning of Migration, is concerned with the relation of war, imperialism and other international tensions to migration; with a plea for a more rational and liberal immigration policy; and with the need of planning migration from the international standpoint, preferably within the framework of the United Nations.

In general, one will find this book truly international in scope and excellent and up-to-date in its coverage of the literature. One will also find it overlong and somewhat repetitious. The story could have been told more effectively in fewer words and without so much detailed development of side issues or related topics. The organization is somewhat loose, which may in part explain the strain to tie it together by the theme of social processes. But whether or not one agrees with the theoretical orientation or the interpretation and recommendations, one must acknowledge that this is the best source of current data and the most comprehensive treatise on the worldwide and fundamental problem of human migration.

MAURICE R. DAVIE

Yale University

The Absorption of Immigrants: A Comparative Study Based Mainly on the Jewish Community in Palestine and the State of Israel. By S. N. EISENSTADT. Glencoe, Illinois: The Free Press, 1955. xii, 275 pp. \$6.00.

Studies of the absorption of immigrants almost always recognize that the process must be seen from the points of view both of the immigrants and of the absorbing society, and must include both objective and subjective criteria. Dr. Eisenstadt, chairman of the Sociology Department at the Hebrew University, Jerusalem, begins his book with a brief but careful analysis of current theory, from which he evolves a broader-than-usual definition of absorption. From the literature, the author deduces the three most commonly used indices

of full absorption: "(a) acculturation, (b) satisfactory and integral personal adjustment of the immigrants, and (c) complete dispersion of the immigrants as a group within the main institutional spheres of the absorbing society." Criticism of these indices leads to the hypothesis that, while "there is no universal index of absorption equally applicable to any society," the influx of a large number of immigrants usually brings about a new institutional structure which is pluralistic in the sense that there develops "a society composed to some extent of different subsystems allocated to different immigrant (ethnic) groups—groups maintaining some degree of separate identity." Therefore, the comparison of the rates of absorption in various countries "should be made through the intervening variables of the emergence of a pluralistic society, whose concrete manifestations differ . . . , from one society to another." The approach, then, is strongly socio-psychological.

Rarely has this reviewer had the pleasure of reading so sharp an analysis of a complex cultural process, the more so because of the shortage of good theoretical formulations in this area. One of the eight chapters takes up some case studies of modern migrations (agricultural immigrants within Europe, the plantation pattern in European, Oriental migrations to South America, Hawaii, etc., and immigration to the U.S.A.). The body of the book, five chapters, constitutes the sub-title: "A Comparative Study Based Mainly on the Jewish Community in Palestine and the State of Israel." Although the population of Israel does not exceed 1,600,000, within a land area of some 8,000 sq. miles, Dr. Eisenstadt's task is almost Herculean. He undertakes to describe the development and present state of an absorbing society, itself made up largely of first and second generation immigrants and undergoing extremely rapid change, and then to describe the process whereby the Jewish population, now 90 percent of the country, doubled from 1948-1952, so that we find that 4 out of 5 Israelis were born in other countries. Such an undertaking indicates that Dr. Eisenstadt is a courageous man.

As this reviewer sees it, the book's highest recommendation is its consistent application of high-level sociological concepts to the study of a problem in which personal values and sentiments have frequently interfered with mature judgment. For example, in discussing the new immigrant's typical patterns of adjustment, we find heavy reliance on R. Merton's "Social Structure and Anomie," and T. Sellin's "Culture Conflict and Crime" for the theoretical framework. The terminology is consistent

with American usage in the attempt to make the approach workable in studying immigration anywhere.

In one of the most valuable chapters, Dr. Eisenstadt first develops a typology of the main types of status and group-transformation, with special emphasis on the basic motivations which led to migration. He describes the "isolated, apathetic family," the "isolated stable family," the "isolated active family," and among the groups characterized by wider social participation, the "cohesive traditional group," the "self-transforming cohesive group," and the "instrumentally cohesive group." He then analyzes "some of the main types of common activities and common values which developed among the various immigrant groups and between them and the absorbing society." Finally, he examines "some of the main conditions which gave rise to these processes, both general absorbing conditions . . . and the internal process of leadership and mobility among immigrants."

Getting back to an earlier point, it seems that the qualitative approach, coupled with the general absence of names, dates, and numbers, would require those unfamiliar specifically with Israel to take a good deal on faith alone. Again, the recurrent qualifying phrases: "In general," "There seems to be a tendency to . . .," "We may expect to see . . .," lead to this criticism: For most purposes, Dr. Eisenstadt might as well have dealt with the mythical state of Ruritania for all we find that is specific to Israel and not equally applicable to a number of other countries. The success with which the book unifies several valuable but incomplete indices of absorption into a broad, soundly-backed theory is its chief virtue.

While those already familiar with the development of modern Israel will not pick up any new facts, sociologists working in the field of immigration will find it a first-rate design for research with the often-undervalued theoretical foundations well-stated. The State of Israel is one of sociology's best laboratories and those who read this book should supplement it with one of the available statistical studies.

ARTHUR JORDAN FIELD
University of Massachusetts

Conservative Judaism: An American Religious Movement. By MARSHALL SKLARE. Glencoe, Illinois: The Free Press, 1955. 298 pp. \$4.50.

Since Conservative Judaism is a religious movement which originated in the United States, hardly existed fifty years ago, and which now seems the most popular branch of American Judaism, it is highly useful that the movement be described and analyzed. Sklare's study is well written, thoroughly documented, and theoret-

cally sound. Throughout the work, which is in many ways much more sociological than theological, the author shows the impingement of cultural and environmental factors on the religious institutions of the Jews and the effects of the interaction of dynamic variables upon a rigid institutional structure. It is Sklare's attempt to show what has happened to one branch of Jewish religion in America in terms of the interacting forces in the Jewish community which makes this work of particular value to sociologists. Dr. Sklare's basic premise is that changes in Judaism have their origin in changes in the lives of Jews. Since these changes result from interaction between Jews and non-Jews, the nature of the general American community becomes one of the determining forces in these changes.

Between 1880 and 1920, American Jewry was transformed by an inundation of East-European Jews who brought with them an Eastern, sacred, highly traditional, and legalistic system, rigidified by centuries of Ghetto living. Brought to a Western, Protestant, secular, industrial environment which emphasized social mobility and acculturation, the dissolution of the integrity of what some Jews call "extreme Orthodoxy" was a foregone conclusion. Seen in this light, Conservatism is a part of the organization-disorganization-reorganization cycle, and is basically a result of the interaction of the desire of Jews to remain apart, to prevent assimilation, to preserve an ethnic church, and at the same time to function effectively in a secular, Protestant, Western community without serious discrimination. So great has been the pressure of this interaction that those who continue to observe the traditional forms with some degree of vigor are now actually sectarians.

Dr. Sklare's primary area of case study was Chicago. Here he found three areas of settlement. In the area of first settlement (slums) he found a semi-Ghetto, served by Orthodox synagogues which were small and made up largely of people from the same village or country. In the area of second settlement (Burgess' Zone III) the synagogue was still Orthodox, but larger, with a heterogeneous membership, and beginning to change in character. In the area of third settlement (Burgess' Zone IV and V), the Conservative synagogue is dominant, with the Reform temple a powerful minority. In the area of third settlement, the Jew finds a certain status deprivation because of Orthodoxy and its "ghetto" stigma. The East European Jew in the third settlement found himself between the under-adapted Orthodox synagogue on one hand and the over-adapted Reform temple on the other, and Con-

servatism was the logical outgrowth. Specific changes occur in the functions of the institution, in the role of the rabbi, in the status of women, in the decorum at services, and in "commercialism" during services, in the change to a Friday night rather than a Saturday morning service, in the role of the individual member, in the emphasis on social activities and organizations for women, emphasis on Sunday and Hebrew schools, and in adherence to dietary and other laws.

Conservatism has made little change in the content of Jewish religion, despite considerable experimentation and compromise as to form. It still emphasizes strongly the desirability of ethnic survival and differentiation. The change has not been based on serious ideological conflicts; in fact, the exact ideological position of Conservatism has not been fully clarified by its rabbinate, and fortunately for the Gentile reader, Dr. Sklare makes little attempt to describe the shadings of theological dogma involved. The major points of differentiation between Orthodox and Conservative seem to be in what to a Gentile are externals, changes in form which do not involve any revolt from traditional theological principles. To Sklare, much of this change results from acculturation and from social mobility. Thus Conservative Judaism is seen to have had a logical, predictable origin and growth. It has cushioned the effects of the dissolution of Judaism as an integrated and highly traditional sacred system. It has offered an acceptable pattern of adjustment to the American environment for many East-European-derived Jews, and has made a considerable contribution to Jewish survivalism.

By the nature of his topic Dr. Sklare is writing for an audience so wide that he will be unable to please them all. The Gentile sociologist will find certain sections of the work much less useful to him than others; religious scholars may find other portions to be socio-logically oriented, and Jewish scholars will find certain sections too elementary. Despite these problems, Dr. Sklare presents a real contribution to knowledge concerning the growth and function of the most prominent division of American Judaism.

JOHN H. BURMA

Grinnell College

Prejudice, War and the Constitution (Japanese American Evacuation and Resettlement: Vol. III). By JACOBUS TENBROEK, EDWARD N. BARNHART, AND FLOYD W. MATSON. Berkeley and Los Angeles: University of California Press, 1954. xii, 408 pp. \$5.00.

With the issuance of this part of its report, The Japanese American Evacuation and Reset-

tlement project of the University of California has now published three books and in addition sponsored research which provided the basis for Grodzins' *Americans Betrayed*. Taken as a unit, the work of Dorothy Thomas, Richard Nishimoto, Morton Grodzins, and the present authors constitutes an extensive and thorough documenting of what was recognized at once as a most alarming phase of our "at home" experience of World War II. As they and other qualified analysts have considered the constitutional issues, the conflict between the War Department and the Department of Justice, the several court decisions, including those of the Supreme Court, and the administrative policies and orders of the War Relocation Authority, only one conclusion has emerged: evacuation established a significant precedent and constitutes our greatest action in abridging civil liberties since the foundation of the Republic.

The central thesis of tenBroek, Barnhart, and Matson may be stated succinctly: the Army, chiefly through the insistence of General DeWitt, and the government made the decision to evacuate all citizens of Japanese ancestry; the Supreme Court supported this act of racial discrimination. Chapter IV, "Two Theories of Responsibility" examines most cogently all evidence available by making a criticism of the "pressure group theory," elaborated chiefly by Grodzins and the "political theory." Their conclusion is that "the responsibility of the Army and the government for the decisions . . . cannot be shifted." Although important, neither pressure groups nor politicians either in their activities or influence can be held to be "responsible" for evacuation. One suspects that the first part of the central thesis of the authors is formulated as a third theory of responsibility. In the opinion of the reviewer it is a corrective, an important corrective, especially to the work of Grodzins which was completed, and apparently unchanged, four years prior to publication in 1949.

Part III "Leviticus," presents the analysis of the court cases, and their final conclusion. It is surprising how little attention has been given by sociologists, in the field of race relations or minority groups, to court decisions. And if attention is given, it is very limited in scope, to wit, readings selected for "Legal Discrimination" in Arnold Rose, *Race Prejudice and Discrimination*. Numerous sociologists have thought Supreme Court decisions to be unimportant. But apparently we have not used a sociological approach to law and court decisions as they represent group values, pressure group tactics, provide a foundation for government administration, and contribute to the integration of the self-conception of a disadvantaged

group. Thus, if for no other reason "Leviticus" is a contribution to the literature. It is superior in its style of presentation: the technical language of the jurist loses much of its awe-inspiring character; legal principles are made meaningful to the lay reader. Since this section represents the most complete statement of all the law cases related to evacuation, it gives a perspective which we have not had before. Although we have known that the Supreme Court some way or other failed, the conclusion of the book consists of seven major points of failure of the Court, and ends with this sentence: "In this way did the United States Supreme Court strike a blow at the liberties of us all."

As an objective record and analysis of Japanese evacuation, the three books from the Evacuation and Resettlement project are a significant contribution to our national life. If a later generation wishes to look at this record it will be there, and for this Professors Aiken and Thomas and others deserve credit. For professional sociologists, public administration experts, and others, a surprising number of problems have been selected, described, and analyzed. This has been done with excellent scholarship and with consideration for future scholars who, we hope, will extend our perspective as has *War, Prejudice and the Constitution*.

FORREST E. LAVIOLETTE

Tulane University

Utopia and Experiment: Essays in the Sociology of Cooperation. By HENRIK F. INFIELD. New York: Frederick A. Praeger, 1955. 319 pp. \$3.50.

People in Ejidos: A Visit to the Cooperative Farms of Mexico. By HENRIK F. INFIELD AND KOKA FREIER. New York: Frederick A. Praeger, 1954. 151 pp. \$3.00.

The first volume reports descriptions resulting from reconnaissance trips and studies of many farming and a few urban cooperatives in various parts of the world. Of more interest to the sociologist is the scientific analysis and comparison of cooperative farming communities in Georgia and Saskatchewan and farms training candidates for membership in the *Kvutza* of Israel. The sociometric test and instruments which the author calls the biographical group interview, the test of needs and the obstacles test are used to assist in choice of settlers, administration of settlements and counselling. The author, director of the Group Farming Research Institute in Poughkeepsie, New York, has applied sociology ingeniously in advancing the coopera-

tive movement but the research is objectively reported, thus contributing to social science. He concludes that "Important as physical facilities undoubtedly are, the success of cooperative farming depends not so much on facilities as on the people who use them."

Special attention is given to the *Kvutza* in Israel, which were the subject of the author's first scientific studies, the collective *Ejidos* in Mexico and the Soviet *Kolkhoz*. He is perhaps at his best when reporting the results of brief visits to settlements such as Penn-Craft Community of the American Friends' Service Committee in Pennsylvania, Amana villages in Iowa, the Hutterite communities of South Dakota, farming cooperatives in Saskatchewan and other similar groups.

The author's own ideological position with respect to cooperation is reflected as follows: "In Palestine, in the Soviet Union, in Mexico, the cooperative community has meant, as we have seen, the introduction of the most advanced farming methods into formerly backward rural areas. Wherever the cooperative community has succeeded in establishing itself, it has brought medical care, improvement in diet, and more decent and sanitary housing to people who formerly lived in dirt and squalor and suffered from malnutrition and other diseases of poverty." p. 45. Apparently the author believes that rewards to members of the cooperatives he describes are greater than rewards would be to members of corporations, haciendas, and family farms functioning under similar material conditions. He does not go into the basic differences in patterns of interaction and cooperation in terms of social structure and value orientation which makes it possible on the one hand for factories to produce automobiles, and on the other, the patterns which exist in the systems he calls cooperatives.

The second volume on the *ejidos* of Mexico is delightful reading. Not claiming to be expert on the *ejido*, Spanish, or Latin American culture, the book will be of interest to Latin American experts who will find documentation for various themes which are believed to differentiate the Latin American culture from Anglo culture.

The mode of interviewing and reporting is illustrated by the following: "It was then that we put to them the question of how they felt about the future of the *ejido*: 'What do you think would happen,' we asked, 'if the government were to abolish the *ejidos*?' It was Sr. Morones who was quickest to react. He broke into a broad smile, then, with a slashing movement of his hand across the throat, he pronounced the classical words: 'Sobrarán sombreros,' which translated literally means: there

would be a surplus of hats, or in other words, heads would roll." p. 140. People living on the *ejidos*, "who had been half-slaves before, could not act as free men." p. 130. They and officials of the Ejido Bank in their support of the *ejido* stand in contrast with business-minded middle classes and many officials who see the *ejido* as a disappointment.

As good sociologists they visited Cardenas, retired ex-president and the father of the modern *ejido*, and asked whether personal relations on the *ejidos* posed any problem. The answer they received made them believe their informant had not understood the question: "Personal problems? There are none in the *ejidos*. That is, when they are left to themselves. If there can be talk of any conflicts at all, they are either invented or instigated by the enemies of land distribution and of every reform, the *haciendados* and the petty politicians in their pay." p. 147. The investigators found on one *ejido*, *La Partida*, that there was much conflict and loafing because people objected to work mates on the work teams. When the investigators thinking of sociometric procedures, no doubt, suggested regrouping, they were told this was out of the question. "We have tried it five times before, and still there is trouble. God only knows whether we shall ever succeed." p. 135. The authors, however, are optimistic and indicate ways in which social science can improve relations on the *ejidos*.

CHARLES P. LOOMIS

Michigan State College

The Western-Educated Man in India. By JOHN USEEM AND RUTH HILL USEEM. New York: The Dryden Press, 1955. xiii, 237 pp. \$3.00.

Cross-cultural education has become so important in the modern world, involving as it does many thousands of persons who go abroad each year for formal training, that an assessment of the results is genuinely needed. The book under review is probably the first major attempt to interpret and evaluate certain ramifications of international education.

John and Ruth Useem were delegated by the Hazen Foundation to spend a year (1952-53) in studying the western-educated man in India. At the outset they decided to restrict their contacts mainly to persons who had returned from America or Britain and were residing in Bombay state. Interviews lasting from three to thirty hours were conducted with 110 persons, about half of whom were American-educated. The results of the study are summarized under sections devoted to changes in the character and outlook of Indians who had studied abroad, the use to which their training had been put

in India, and the implications of their experiences for international understanding. In a final section the authors offer some recommendations. The Useems found that returnees had changed in various ways. Most of them had gained self-confidence; many had acquired a new philosophy of life, or different methods of working, or a more democratic approach to interpersonal relationships. In the process of discovering the West about half of them "discovered" India. But the changes were by no means the same for those trained in America as in Britain. The English-trained, for example, were more cautious about taking risks; the American-trained were more optimistic and were inclined to gamble on lucky breaks. Those trained in Britain were more inclined to speak about their relations with a man in terms of his station in life; the American-returned spoke more frequently about the value of an open-class system and the opportunities it afforded for upward mobility. Those returning from America had more exaggerated ideas of their own economic worth than the British-trained and therefore tended to expect higher salaries.

Jobs are scarce in India, and even western-educated men have serious employment difficulties. Most of those interviewed were holding positions for which they had received no specialized training while abroad. On the average, it took about a year after returning to find a permanent job. Although the returnee enjoys a certain amount of prestige, his foreign experience cannot always be translated into a good job or rapid advancement. This is partly due to employment difficulties in general, partly to the system of preferential selection determined by loyalty to family or community (caste or religious group). In bureaucratic organizations especially, this preferential system operates to the advantage of persons related by family or community to those in positions of authority. Furthermore, centralization of bureaucratic power makes rapid upward mobility difficult for the man on the lower levels; especially if he is not entitled to preferential treatment. Often he becomes disillusioned and frustrated because of his inability to apply what he has learned or to advance occupationally.

The foreign-educated person still enjoys considerable prestige, especially in rural areas; but less importance is attached to foreign training than in the old days. This is partly due to improved educational facilities in India, partly to the inevitable slump in prestige of a foreign education as the number of persons trained in the U. S. and the U. K. increases—the "dime-a-dozen" idea.

The foreign-educated have a better "understanding" of America and Britain in terms of

information about the people and institutions of these countries. Most of them have discarded their old stereotypes; some have taken on new ones. Probably the majority admire and like the American or British people, but not all are devoted to the American or British way of life. Americans are especially liked for their informality and friendliness, but most of the Indians were disturbed by the racial discrimination which they experienced or observed in the United States or England. Some expressed doubt that American friendliness was an expression of sincerity.

One of the most pertinent of the recommendations, it seems to the reviewer, is that funds be spent to aid the foreign-returned in India in securing the type of employment for which he has been trained. There is no sense in sending more and more people abroad unless they can utilize their training for the maximum benefit of India, or any other country, for that matter. This recommendation should be seriously considered by the government of India and by American foundations and government agencies engaged in international exchange of educational personnel.

Two questions can properly be raised about the book: Are the findings valid? Are the foreign-trained in Bombay state fairly representative of the whole of India? The authors are quite aware of both of these questions. They report that efforts were made to check on the validity of the results but accurate communication under such circumstances is always difficult. The reviewer asked a sophisticated Indian who had read the book to comment on the second question. His answer was that the findings in Bombay State were fairly applicable to the country as a whole.

Unquestionably the book is the best study of its kind that has been done.

NOEL P. GIST

University of Missouri

Urban and Industrial Taiwan—Crowded and Resourceful. By ARTHUR F. RAPER, HAN-SHENG CHUAN, AND SHAO-HSING CHEN. Taipei: Foreign Operations Administration Mutual Security Mission to China and National Taiwan University, 1954. 370 pp. No price indicated.

Virtually all Asian countries today are beset by two related problems: low standard of living and growing pressure of population on available resources. Economic development, particularly industrialization, is regarded as offering the only lasting solution to both these problems, and the United States has become not only the source of capital, but, perhaps of greater mo-

ment, the model for much of the development now being planned in Asia. Often we find an understandable tendency to take the desirable results for granted once the proper American techniques have been introduced. Yet if these proposed innovations are to be effective, we need systematic study of local conditions, such as those relating to incentives to work and to capital formation, for example, which can alter the rate and direction of any economic development. Where development programs have already been initiated, we need to know more about the ways in which the presence of industries has affected the people in the area. Taiwan, or Formosa, is of particular interest in this connection because it is, next to Japan, the most industrialized area of eastern Asia, with promise of even greater economic development with U. S. assistance. There is the possibility that Taiwan could become the pilot demonstration for the industrialization of other Asian countries.

In 1953 the Foreign Operations Administration Mutual Security Mission to China and the National Taiwan University jointly sponsored a factual survey of urban and industrial conditions in 17 communities of Taiwan. This was a counterpart to a similar survey of rural Taiwan published in 1953 under the title of *Rural Taiwan—Problem and Promise*. The general purpose of the survey was to evaluate Sino-American activities for improving economic and social conditions on Taiwan so as to provide guidance for future policies. Consequently much of the report of the survey will be of primary interest to officials directly concerned with aid programs in Taiwan. For the busy official, introductory chapters present briefly the salient facts about the population, resources, and industrial development of the island as a whole and each of the 17 communities included in the survey; there are also chapters summarizing the findings and recommendations of the survey, and these are particularly valuable for insights into the problems of industrialization generally. Those with more time and specialized interests will find chapters dealing specifically with such topics as public and private industry, wages and income, transportation in one representative community, government leadership and economic organizations, population numbers and characteristics, and recent changes in education, health, and religion.

In seeking information on the effectiveness of aid programs, 1,383 representative Chinese households in the 17 communities were interviewed for data on living conditions and 139 of these were intensively interviewed for family life data, and it is this material in the report that sociologists may find useful. Persons in-

terested in the adjustment of refugees will find the data of greatest value, but unfortunately the very fact that the survey became involved in the abnormal refugee problem has detracted from its value to others. Those wishing to learn about the effects of industrialization and urbanization as such on this Asian society will be disappointed simply because the Taiwan Chinese, who are permanent residents of the island, and the "Mainlanders," who are refugees from mainland China, are often lumped together when generalizations are made. This makes many of the conclusions about the effects of urbanization, on family life in particular, virtually useless except as applying to an abnormal wartime-refugee situation. For example, the authors find that the average size of the 1,383 households was 5.4, and they conclude therefore that the "traditional extended family is now on the decline in urban areas" (p. 261). But a high proportion of these households were established by Mainlanders, often we are told by only one man, who as refugees are temporarily (supposedly) separated from the rest of their families.

This failure to separate refugees from more permanent urban residents similarly limits the wider validity of other generalizations relating to mobility, reasons for coming to urban centers initially, and the strength of ties between urban dwellers and their rural kin, to mention but a few of the conclusions. Of course these findings may well be valuable as benchmarks to measure change if studies of the same groups are made in the future.

The criticism that is leveled at most surveys—that they are broad but thin—applies to this report also. Thus the equivalent of only two pages is devoted to labor organizations and nothing at all is said about labor legislation, except indirectly. The most that can be said for much information is that it is factual. Even the broadly stated purposes of the survey hardly justify the inclusion of *jejune* information on "nearby attractions" such as hot springs for each of the urban centers investigated, nor is the item that "three fifths of the urban roofs and little more than three fifths of the rural roofs leak" an especially significant guide for future Sino-American policies.

On the other hand the report contains considerable data on urban conditions in present day Taiwan that the social scientist and government official might find useful: information on work patterns and insight into the procedures by which a person sets up a small business; urban indebtedness; household expenditures; status items in the life of the people; marginal self-employment; and particularly a chapter describing in some detail a refugee slum in the

city of Taipei. The many photographs, maps, and graphs are excellent and add considerably to the text, but the lack of an index is a major handicap.

The worth of a survey like this must be measured by what it leads to ultimately. Chinese and American officials charged with demonstrating to the rest of Asia the social advantages of a non-communist economy and political system must be impressed by the almost unrelieved picture of exceedingly poor urban living conditions, and perhaps all concerned with the future of Taiwan will be given pause by the finding that "the majority of the rank and file people as they themselves see it, have thus far received little specific benefit from Sino-American activities." (p. 15).

RICHARD J. COUGHLIN

Yale University

The Development of Social Administration. By ROBERT KWEKU GARDINER AND HELEN O. JUDD. London: Oxford University Press, Geoffrey Cumberlege, 1954. 208 pp. 10/6. U. S. Distributor, Oxford University Press. \$1.70.

One of the authors of this book was formerly the head of the Department of Extramural Studies at Ibadan University College in Nigeria and is presently the Director of Social Welfare in the Gold Coast. The second author is on the staff of the Department of Social Science and Administration at the London School of Economics. Their joint effort arises from their familiarity with social problems in the United Kingdom and in West Africa and from their experience in preparing colonial students for welfare work in their own countries. It is written in the hope of guiding other students and teachers who are concerned with the social effects of rapid technological change in industrially underdeveloped areas of the world.

In accord with its aim, the book is written in clear and simple terms. As its title suggests, it is historically oriented. Its material is divided into problem areas, such as public health, labor organization, government assistance, welfare policy, and delinquent rehabilitation. The discussion is centered, in most instances, on historical sketches of the various problems as they evolved in the United Kingdom. References are made to parallel conditions in West Africa and what is being done about them. Welfare measures are evaluated in the light of modern democratic philosophy, and generalizations in the form of cautions and safeguards to be exercised are offered as they are indicated by the history of British industrial expansion. Thus, the advantages and disadvantages of such al-

ternatives as paternalism and self-help, centralization and decentralization of welfare programs, state and private aid, and preventive and corrective services are reviewed.

Several themes run through the discussions. One is that economic development is not enough. Technological and other material advances must be accompanied by social changes which are consonant with them. Another argument is that social development cannot be the concern of a selected few, whoever they may be. It must emerge from a community consciousness, from a group feeling which is generated at the neighborhood level, not imposed, served up, or cajoled by appeal to private interests. Another theme is that social development is a relative success and is never fully accomplished. Each improvement brings new problems. "Social well-being is not a state, it is a process."

If there is a criticism to be made, it is with respect to the authors' application of the lessons to be learned from British social history. Undoubtedly they are familiar with the difficulties of grafting a European solution on an African problem, but the reader is not made sufficiently aware of the obstacles raised by tradition. It is not always clear whether it is believed that what has happened in one historical setting, the British, can be expected to happen in another, such as the African. Something more than veiled and indirect appraisals of the success of programs under way in Africa would have been helpful in this respect.

H. G. BARNETT

University of Oregon

Changing Melanesia: Social Economics of Culture Contact. By CYRIL S. BELSHAW. Melbourne, Australia: Oxford University Press, 1954. x, 197 pp. 17/6. Distributed by Oxford University Press, New York. \$2.30.

Changing Melanesia is a welcome addition to the growing literature on socioeconomic change in underdeveloped areas. Cyril Belshaw is well qualified to analyze that phenomenon in eastern Melanesia, with his undergraduate degree in economics, a doctorate in anthropology from London School of Economics, three years as administrative officer in the British Solomon Islands and, most recently, field research in New Caledonia and the New Hebrides. The present study may be read with profit in conjunction with his earlier publication on the same region, *Island Administration in the South West Pacific* (1950).

French New Caledonia, the New Hebrides condominium, and the British Solomons are not treated separately in this book, since Bel-

shaw has chosen to present a single account of eastern Melanesia by combining representative materials from the three component areas. Quite properly he points out the heterogeneous nature of that region with thousands of small communities distinguished by a startling variety of languages and cultures. However, he maintains (and quite legitimately) that certain broad generalizations can be made about the processes by which the lives of black Melanesians have been modified significantly in a century of contact with Western cash economy.

The author's purpose is three-fold. The first nine chapters describe aboriginal Melanesian economics, historical trends of European enterprise, and changes in regard to land, labor, capital, property, organization, production, and exchange. Chapter Ten is Belshaw's contribution to the theory of social change, expressed tentatively and in the hope that other social scientists will enlarge upon his suggestions and test their validity in other areas. The final chapter is written especially for colonial administrators and applied social scientists.

In the descriptive sections, which are based upon documentary research and the author's personal knowledge, no attempt is made to arrange the data in chronological order (except briefly in a historical summary) because Belshaw's approach to his problem is functional and not historical. Although he finds that economic changes have been abundant in eastern Melanesia, the aboriginal structure on the whole remains intact. Melanesians continue to stress direct relationship of production to consumption, social and economic functions of productive activity, cooperation of individuals in accumulating capital, reciprocity in exchange, and non-individual ownership of property. In this region, valued by Europeans for its raw materials, Melanesians have been exploited as laborers. Incentives to commercial production by Melanesians are too often countered by associations with village, family group, and land. In World War II, large concentrations of American troops with tremendous quantities of modern equipment and material resources awakened in many an indigene his first realization of the potential power of money. Conflicts increase as Melanesians now seek to satisfy their whetted appetites for money and imported manufactures within their traditional system of techniques, organization, and values.

From his analysis of events in eastern Melanesia, Belshaw explores the possibilities for a theory of social change in which certain concepts from anthropology and economics are combined. He considers the possible effects of ecological factors, biological characteristics of members of a society, values which they as in-

dividuals support, and institutional patterns of their interaction. Change begets further change, he notes, and men strive for compatibility of ends and for satisfaction of potential desires, which actions they will tend to carry out in the most economical manner apparent to them in terms of their knowledge, perception, values, and opportunity. These and other principles are utilized in accounting for changes that result from culture contact ("acculturation" is a term avoided in the British tradition). An anthropological approach similar to that of Malinowski, Firth, and many of their students is enlarged by concepts borrowed from economics, as when Belshaw discusses elasticity of demand, social efficiency, and the initiating and multiplying effects of changes. Although the author almost never mentions psychological theory, there is much in his presentation that is psychological. His emphasis upon individual perception, desires (ends), and incentives to innovation is to some degree reminiscent of H. G. Barnett's *Innovation* (1953), published four years after Belshaw had completed his manuscript. In the brief space of this review, further comment cannot be made concerning the richness of Belshaw's insight into the changing social economics of eastern Melanesia. The reader is urged to explore these vistas for himself.

In applying social theory to administrative problems, the author stresses the need to "think through" any proposed policy because of the ramifying consequences of social acts. This is a job which he believes should be done by administrators working in close harmony with applied social scientists. Constructive programs, in his opinion, might better be achieved by building on what is already present in Melanesian culture. He closes on a note that should be carefully considered by all applied scientists, that they have a responsibility as citizens to see that the tools of their profession are not improperly used to the detriment of human society.

LEONARD MASON

University of Hawaii

The City—Urbanism and Urbanization in Major World Regions. By ROSE HUM LEE. Philadelphia: J. B. Lippincott Company, 1955. viii, 568 pp. \$5.50.

This volume endeavors to present an analysis of the urban process within a broader context than usually obtains for undergraduate textbooks in this branch of sociology. As would be expected, the text that undertakes an analysis of urbanism or urbanization as world-wide

phenomena, utilizing a cross-cultural evolutionary approach in the process, assumes a freighted and challenging responsibility. In this instance the result is not without merit.

The organization of materials in *The City* follows the usual pattern of texts in urban sociology save for a section devoted to a description of city growth in Western Europe, Asia and Africa. Other sections deal with the phenomena of structure, institutions, those amorphous "ways of life," problems, and planning. Each part is introduced with a "prologue" which defines the purposes of the encompassed chapters and indicates such limitations as need be recognized in interpreting them. In addition, each chapter contains a summary, discussion questions, suggested student projects, and a list of readings. These aspects give the volume many highly teachable moments, techniques, and data.

In some ways this is a Chicago-oriented text, Chicago of the University and the town. The ball of urban theory is skillfully passed from Park to Burgess to Wirth to McKenzie to Redfield, Bogue, Warner and others. One misses, however, passes to many authors of discrete and general studies in the field, some of whom may be surprised to note that their works are omitted. This is to be expected, I presume, for after all, a systematically oriented text cannot enthrone all the pretenders. And Chicago University's priority in this field was not thrust upon it. The question, I suppose, is more related to the author's selection of materials, which could have been more expansive and extensive.

The intriguing aspect of Dr. Lee's work is its emphasis on world cities. One expected this overlay of regions and cities to follow throughout the text's analysis. Unfortunately it does not. Except for specific references under planning and urban redevelopment, there is no integration of non-American cities' structure and processes in other parts of the text. The usual provincial pattern of evidence and analysis prevails. This reviewer was particularly disappointed to find no reference to South American urban communities. Rio de Janeiro, Caracas, Santiago, and Buenos Aires, to name but a few, no mean cities, are worthy of urban sociology's attention within the text's context.

Despite some further limitations in the pedestrian use of the concept "region," and in the treatment of specific aspects of urban institutions and ways of life, related very largely to the selection of the materials, *The City* is a teachable text, providing adequate ground

rules for the use of urbanism and urbanization as universally applicable concepts.

IRA DE A. REID

Haverford College

The Urban South. Edited by RUPERT B. VANCE AND NICHOLAS J. DEMERATH, with the assistance of SARA SMITH AND ELIZABETH M. FINK. Chapel Hill: The University of North Carolina Press, 1954. xii, 307 pp. \$5.00.

In this volume eighteen contributors do two things of importance: they illustrate—at times quite vividly—the nature of urbanization and they document more fully many of the changes underway in the South, still the most rural region of the nation.

The first five chapters (by Heberle, T. Lynn Smith, Lorin A. Thompson, Hitt, and Dinkel) deal specifically with urbanization of the South in terms of four components: (1) the increase in the number of points at which population concentrates and a growth in the size of these concentrations; (2) the increasing shift from agrarian to industrial, service, and distributive occupations; (3) the redistribution of the population and the peopling of the cities; (4) the spread of urban ways of living to the surrounding rural areas, illustrated by the study of fertility rates.

The next four chapters on Organizational Aspects of Southern Cities (by Vance and Sara Smith, Demerath and Gilmore, Kaufman, Porterfield and Talbert) deal with metropolitan dominance and integration, ecology, social class and crime. Obviously, these topics do not begin to cover all of the organizational aspects one would wish to learn about but this inadequacy does not detract from the quality of the chapters that are included.

The final part on Urbanism, Change, and Tradition (Bullock, Ewing, Titus, Hunter, F. Stuart Chapin, Jr., Nixon) discusses race relations, Southern politics, community organization, city planning, and an interesting farewell to "Possum Trot."

The unity in this symposium is gained by the focus upon a given geographical region more than upon a common analysis of the concept of urbanization itself. Chapters vary from the highly statistical ones dealing with demography and crime to what might be considered insightful essays on social class or community organization. A longer review could include a number of the findings, set forth in the various chapters, which although not always surprising to the sociologist are nevertheless sufficiently pointed to make the reading of this book a rewarding experience.

IRWIN T. SANDERS

University of Kentucky

Social Area Analysis: Theory, Illustrative Application and Computational Procedures (Stanford Sociological Series, Number One). By ESHREF SHEVKY AND WENDELL BELL. Stanford: Stanford University Press, 1955. vi, 70 pp. \$1.75.

Professors Shevky and Bell have in this work revised, expanded, and applied to the San Francisco Bay Region the typology and methodology utilized in the Shevky-Williams study, *The Social Areas of Los Angeles: Analysis and Typology*, published in 1949. Both studies present essentially similar schemes for local area analysis of social and economic characteristics of cities through use of census tract data.

In the work under review, as in its predecessor, inter-census-tract variation is reduced to three dimensions: social rank, urbanization, and segregation. Indexes are calculated for each of the three variables, standardized to the 1940 Los Angeles census tract range taken as 0 to 100. The index of social rank is based on two measures: occupation (proportion of employed persons in "white collar" and service jobs) and education (proportion of population age 25 years and over with more than eight years of schooling). The index of urbanization is derived from three measures: fertility ratio, proportion of females 14 years of age and over in labor force, and proportion of dwelling units which are single-family detached units. The index of segregation is the percentage of the population which is either non-white or foreign-born white from eastern and southern Europe, Asia, French Canada, and Latin and Caribbean America.

A significant innovation of the present study is a test of the validity of the formulation of the social area typology. Through use of factor analysis on 1940 census tract data for both the Los Angeles area and the San Francisco Bay Region, Professor Bell has demonstrated to his satisfaction (1) that the three basic elements in the typology are three factors necessary to account for inter-tract variation, and (2) that the three indexes utilized are unidimensional measures. The authors further report that Professor Robert C. Tryon, University of California, Berkeley, has independently identified for the 1940 Bay Region three principal clusters of census tract characteristics comparable to social rank, urbanization, and segregation. "These three clusters almost completely account for the variation between tract populations with respect to census variables."

Professors Shevky and Bell provide a neat empirical device for putting their three yardsticks to work in urban research. A 4x4 table is set up by cross-classification of all tracts according to social rank and urbanization indexes, the range of each of the two indexes being

divided into four equal parts (0-24, 25-49, 50-74, and 75-100). One such 16-cell table is then prepared for low segregation tracts (those having below the metropolis percentage of non-whites and specified foreign-born whites), and another 16-cell table is prepared for high segregation tracts. Every census tract falls into one of the 32 cells (ordinarily some cells will remain empty). In any cell will be found those census tracts which fall in the same quarter on social rank and urbanization measures, and in the same half with regard to segregation. Each cell identifies what is referred to as a type social area.

Once the census tracts of a given city at a given time have been classified according to this 32-cell scheme, the analysis of the relationship of any particular series of census tract data to the three basic variables of the typology becomes relatively easy. The student of suicide, for example, could merely calculate suicide rates for the 32 groups of census tracts and insert the figures in each of the appropriate cells. Patterns of interrelationship between suicide and the three basic variables could be quickly ascertained by inspection. Further investigation could then be carried on by reference back to tract scores on each of the three indexes, and by use of standard multiple-correlation techniques. Such studies might be replicated in different places, at different points of time, and with different reporting units (such as counties instead of census tracts).

The authors emphasize the tentative character of many elements in their formulation. They invite experimentation with alternative methods of index construction. They make as explicit as possible their computational procedures, that others may subject them and the assumptions underlying them to sharp scrutiny. "It is our hope that our colleagues will test, apply, and criticize them, and that, as a result, further revisions can be made which will improve the typology as an instrument for the comparative study of cities."

The reviewer does, however, regret the lack of attention in this work to intra-tract variation as an uncontrolled factor of considerable significance in local area analysis. May not a "gold coast and slum" tract be identified with a middle-class tract on the index of social rank? Had block data rather than census tract data been utilized in the Bay Region analysis, might not the boundaries of the 32 type social areas have been very different?

Professors Shevky and Bell have made a substantial contribution to urban research methodology with this pioneering study. They are especially to be commended for the conciseness and clarity of their writing. The 70 pages of

this report deserve the attention of every serious student of the city.

DAVID B. CARPENTER

Washington University

The Non-Residential Population of the Central Business District of Flint, Michigan: A Study in Human Ecology. By HARRY P. SHARP. Ann Arbor: University of Michigan, Institute for Human Adjustment, 1954. vi, 63 pp. Mimeo. \$1.00.

The Separation of Home and Work in Flint, Michigan. By LEO F. SCHNORE. Ann Arbor: University of Michigan, Institute for Human Adjustment, 1954. v, 53 pp. Mimeo. \$1.00.

The two monographs under review are the 16th and 17th in the impressive series of publications produced by the Social Science Research Project, jointly sponsored by the University of Michigan and the community of Flint. These two studies have in common their dependence for data on a 1950 origin-destination survey of the Flint area, and thus provide case-study examples of the usability of traffic survey data for social science purposes. Unfortunately, neither author has reported his methodology carefully. True, Mr. Sharp has provided a brief account of how the traffic survey was conducted, but neither he nor Mr. Schnore has indicated whether there were problems in adapting data that were collected for one purpose to studies that presumably have rather different purposes. Thus we cannot tell whether preestablished definitions, classifications or tabulating strategy proved to be serious limitations. It also seems strangely incomplete, considering all of the sampling "know-how" at the Survey Research Center, that the problem of sampling errors was never treated and that there was only rather passing mention of possible bias errors (since Sharp reported that the "internal" portion of the initial survey was based on a 5 percent dwelling unit sample and that the "external" part reached only 62 percent of those vehicles entering an outer traffic cordon).

Mr. Sharp's report is essentially limited to presenting tabulations that analyze trips into the Flint central business district. He perhaps illustrates but nowhere really tests the theoretical framework presented in the first chapter and, curiously, in an appendix. His empirical findings do provide significant bench mark or profile type material. He has found, for example, that during each 24 hours of a standard week day, about 40,000 persons, representing nearly 12 percent of the 327,000 residents within an 18-mile radius, had destinations in downtown Flint. The gradient character of this phenomenon is shown by the fact that 17 percent of those

residents within 2 miles came downtown while only 5 percent of those in the 12-18 mile zone made the trip each day. (It is possible that Mr. Sharp has confused "persons," as he reports them, with "trips" which are usually produced by this type of traffic survey. Since a single person could make more than one trip from his home to the central business district during a day, Sharp's statistical ratios, as they are stated in "person" form, may not be accurate.) He has also reported that four-fifths of the persons arrive by automobile, with this proportion rising sharply for outlying areas; that shopping, work and recreation, in that order, were the most important reasons for coming downtown; that the size and composition of the non-residential population changed markedly during each day's cycle; and that Negroes were disproportionately under-represented among central business district entrants.

In developing a fairly detailed statistical analysis of home-to-work patterns involving the six large General Motors plants in Flint, Mr. Schnore has shown resourcefulness by drawing on earlier Flint studies and on census data and has been imaginative in his search for possible theoretical implications of his findings. He has found that workers on each day's second and third shifts live farther from the plant than those on the first shift. Employing theoretical suggestions by Hawley and others, to account for this fact, he has reasoned that the second and third shift include many marginal workers whose employment status varies with overall employment fluctuations; that there is a broad fringe area around Flint in which part-time farming and alternation between agricultural and industrial employment are common; and that this fringe area can itself be conceived as spatially marginal to the community it surrounds. Unfortunately, there are also alternative hypotheses that can be proposed regarding this relationship—Involving workers' ages, length of employment, degree of continuity in employment, and length of residence in the Flint area—that apparently cannot be tested using these particular origin-destination survey data. Space limits further summary of Mr. Schnore's report. It deserves study by those who recognize the crucial importance of home-work travel patterns in understanding contemporary urban life.

It would be helpful if future reports of the type reviewed here could provide graphic and map presentations in fuller measure, for these might allow the reader more effectively to grasp rather complex relationships, particularly those involving spatial aspects of Flint as a community. Unless the reader has been in Flint he finds orientation difficult.

As reports of empirical findings, both of these monographs deserve wide circulation among social scientists, city planners and transportation engineers. In the key task ahead, of imaginatively creating more adequate theoretical models of the functioning metropolitan community, these studies provide certain statements of relationship that call for interpretation and integration.

DONALD L. FOLEY

University of California, Berkeley

American Society: Urban and Rural Patterns. By EDMUND DES. BRUNNER AND WILBUR C. HALLENBECK. New York: Harper and Brothers, 1955. xviii, 601 pp. \$6.00.

A familiar criticism of general works on rural sociology and on urban sociology is that they lack orientation in theory. Many a general treatise on a substantive area of sociology appears without a precisely stated theoretical framework. Some such works consider the reporting of such theory as there is in the field to be a part of its task and do so, leaving the work itself lacking theoretical orientation or organizing principles. This criticism may not be made of this volume. It places its discussion squarely and explicitly in the context of culture-structure-function theory. The authors have provided a volume which should be of great value and enjoy wide popularity as a textbook because of four prominent characteristics: (1) It is oriented in theory, (2) it is organized economically by a sociological logic, (3) its simply-stated principles are amply documented with descriptive facts, and (4) its style is simple, clean-cut writing. Despite its obvious design for textbook use it should attract the attention of a wider audience because its overtones seem to carry the dynamic quality of modern life.

The theoretical orientation and logical order in which the materials are presented make it analytical rather than merely descriptive. In fact its tight logic may be accounted for by the fact that it sets out to discuss urban and rural society in relation to each other. This treatment avoids the usual difficulty of treatment to be observed in separate rural and urban sociology textbooks in which focus of attention on one is achieved by bringing it into relief through clumsy and sometimes erratic contrasts with the other. Professors Brunner and Hallenbeck have handled the two together with a unified neatness. The unity and balance of treatment is a tribute to the authors, who as friends and colleagues, have produced a collaboration which reflects a mutual esteem and the

mellowed wisdom of each in his area of specialization.

Part I of this volume provides the basis for analysis by presentation of the conceptual scheme beginning with a discussion of culture in language which may be readily understood by the beginning student and the layman. This is followed by a description of the dynamic character of modern society which includes major social and cultural trends and their direction. The orientation section is concluded with a discussion of the thought forms, standards and values belonging to the culture and in terms of which a dynamic assessment of American society must be made. The title of this chapter, "Is Democracy Practical?" suggests its challenge to think about our society and its culture.

The structure of American society is described and analyzed in Parts II and III of the book. The dimensions of structure are carefully handled and preclude confusion of different orders of groupings within the society. Part IV concerns itself with function as related to structure and again results in a remarkably effective simplicity. It is a simplicity that is the achievement of a great breadth of knowledge and understanding.

At some points, as in the discussion of social change, it seems that more pointed theoretical discussion would make the descriptive materials more meaningful. Occasionally the brevity of description of some topics seems to be a fault, but these have been described in much detail in sources to which teacher and student have recourse. With the simple generalized statements provided in this volume as guides, elaborated study of such topics may be undertaken. This fact makes of it an exceptionally useful teaching aid.

The chapters on "The Social Institution of Business" and those having to do with community development, Chapters 22 and 23, are remarkably interesting and well presented. The latter two chapters appear to be especially valuable because they offer carefully stated principles as a basis for discussion and never get confused in loose description or vague notions. There is little in the literature which can compare with these chapters in introducing students to the field of community development.

Professor Brunner and Professor Hallenbeck have given in the final chapter their testament for democracy and its institutions. Positive in outlook, this chapter has restraint and great dignity. What manner of men the authors are in the evening of their teaching careers is revealed in chiseled relief. Devotion to our ways and to our principles and values is shown

not to be necessarily expressed in loyalty to a small and intimate segment of society. "In a democracy no individual and no community can ignore the larger relationship," the authors point out in describing the interdependence characteristic of the modern world. They express the belief that: "A changed social pattern is emerging as it did after the Renaissance and after the political and social revolutions in England, France, and the United States in the eighteenth century. There is at least some evidence that this pattern will make human welfare a central feature. The cooperative enterprises established to this end, quite firmly in many communities, as yet quite tentatively in world terms, are a ground for hope and for effort. The basic fact of human existence today is the need for cooperation toward such a goal. The alternatives are unthinkable."

LEWIS W. JONES

Tuskegee Institute

Hungry Generations: The Nineteenth-Century Case Against Malthusianism. By HAROLD A. BONER. New York: King's Crown Press, Columbia University, 1955. viii, 234 pp. No price indicated.

Although *Hungry Generations* is devoted to the history of Malthusianism in 19th century England, the reviewer feels that its main contribution rests in two themes. The first of these is "the importance of suspecting our still-existing social doctrines, even—or perhaps especially—our most respectably supported ones, as possible instruments of class advantage." (p. vii) The second is the conspicuous contribution of literary figures to the Malthusian controversy.

In the first chapter, which Mr. Boner calls "Anticlimax to Hope: 1798," the Malthusian theory is regarded as having effectively neutralized social optimism, a product of centuries of social and political thought. The Malthusian theory not only made it appear that relief from misery was an impossibility but also placed the privileged classes in an unassailable position since poverty became the fault of the poor themselves. The depth and pervasiveness of public interest in social issues derived from Malthus is more effectively presented in this book than anywhere known to the reviewer. *Hungry Generations* follows the Malthusian debate, with its many ramifications from the appearance of the first essay to "The Twilight of Malthus: After 1859." Much more attention is given the assailants than the supporters of Malthus.

One of the most impressive achievements of

the book is the skill with which Mr. Boner relates virtually all of the great names of the century, especially the literary figures, to the Malthusian problem. Dickens, for example, created a Malthusian in Scrooge. Upon being solicited for aid to the poor, Scrooge replies in effect, that it would be better if the poor die and thus decrease the surplus population. According to Boner, the degree of participation supplies evidence of the "sound and healthy relationship between literary men and the major concerns of their society."

The reviewer finds *Hungry Generations* a valuable addition to the literature concerning Malthus and the participation of others in the social issues stemming from the controversy. It was disappointing to the reviewer, however, that the scope of the book did not encompass present-day neo-Malthusianism.

J. ALLEN BEEGLE

Michigan State College

Principles of Criminology (5th Edition). By EDWIN H. SUTHERLAND. Revised by DONALD R. CRESSEY. Philadelphia: J. B. Lippincott Company, 1955. viii, 646 pp. \$6.00.

Readers will agree that Cressey's revision of the late Edwin H. Sutherland's popular and thoroughly respected textbook in Criminology produced little change in the philosophy, style, or basic content that characterized the earlier editions. The new revision is somewhat better organized and better illustrated with results of recent sociological research, but the central theme is essentially Sutherland's "differential association."

The most important contributions to criminology in this, as well as in earlier revisions, are found in the chapters on "A Sociological Theory of Criminal Behavior" (now Ch. 4), "Processes in Criminal Behavior" (Ch. 12), and "Behavior Systems in Crime" (Ch. 13). These, of course, are the chapters where, in earlier editions, Sutherland developed and expanded his ideas on "differential association." Slight and only minor revisions were made in these chapters.

A sincere and determined effort was obviously made to tie the remaining portions of the book more closely to the "differential association" schema. That this attempt was only partly successful is chiefly due to the fact that the arguments involved in the "differential association" schema remain in this revision, as they were in previous editions, a general orientation or a sociological point of view rather than an empirically testable sociological theory. The argument that all social behavior, including deviant social behavior, is learned through a process of inter-

action may have been important in destroying the tenets of biological determinism and the hedonistic calculus, but it is hardly adequate as a set of theorems on the basis of which a scientific theory of criminality is to be founded. The major defect of the "differential association" argument is not that it violates either common sense observation or the results of more refined research, but that its empirical meaning is so general and ambiguous that it defies any realistic test of validity. It is no accident that recent research based on the "differential association" argument (e.g., Lindesmith, Cressey, Becker) is more significant for its methodological contributions than for its theoretical or empirical content.

It must be said, in defense of the book, that the "differential association" argument is consistently applied, even in the chapters on correctional treatment (Ch. 22), the prison community (Ch. 24), and prevention of crime and delinquency (Ch. 29). The courage and conviction with which the authors present their general thesis is greatly to be commended, and it gives their book a coherence and rationale not found in any other criminology text. If the thesis is sometimes lacking in precision and scientific rigor, it is because "criminology at present is not a science (even though) it has hopes of becoming a science" (p. 19). Moreover, "differential association," in this reader's opinion, offers greater prospects for the development of criminology as a science than do competing "theories" currently popular among some of the endocrinologists, physical anthropologists, constitutional psychologists, or psychoanalysts working in the field.

The text, because of its insistence upon sociological explanations for criminal behavior, draws less from research in related disciplines such as psychology, cultural anthropology, and psychiatry than might be desired by many readers. References to non-sociological sources appear to be generally critical (see, for example, Chapters 7 and 22) and the authors at times appear to operate under a double-standard for the evaluation of research results, with the demands being less stringent for sociological materials than for work in other disciplines. Student readers, as a consequence, might get a comprehensive but favorable view of the sociological approach to criminology, whereas they are perhaps likely to underestimate the contributions of jurisprudence, medicine, and other fields of study. For those teachers who regard criminology to be an exclusively sociological discipline, the above feature of the text, of course, will not be distasteful.

The greatest improvements over the earlier editions occur in Part II, which is concerned

with the control of crime. Many readers felt that the earlier editions were weakest in their discussions of the police, courts, and treatment agencies. This weakness is greatly reduced in the present text. Chapter 24, "The Prison Community," for example, is an unusually insightful sociological discussion of the group aspects of institutional life and ranks with some of the work of Tannenbaum, Clemmer, and Taft as the best textbook material available on prison society. This new chapter includes a sound critique of group therapy and some brief but cogent remarks about prison culture, another sociological topic that is too frequently overlooked in criminology textbooks.

The present edition should continue to be as popular and influential within the field of classroom criminology as were its predecessors. It is nicely organized, well written, and generously illustrated with recent and relevant research materials. Above all, it is a sociological work, and makes no pretense of attempting to unite the divergent disciplines that are obviously involved whenever a state or community defines criminality, identifies the offenders, and tries to deal with the recalcitrants so as to produce a minimum of social discomfort. This last feature, to professional workers in the many areas of crime control, may be regarded as a serious defect. For the instructor of an elementary criminology class, however, it may well be a virtue.

CLARENCE SCHRAG

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The Tree of Culture. By RALPH LINTON. New York: Alfred A. Knopf, 1955. xiv, 692, xvi pp. \$5.75.

When the *Study of Man* was published in 1930, it became evident that American social science had in its ranks a first rate mind, capable of digesting and making systematic sense out of vast amounts of data, and endowed with the blessed capacity of presenting the fruits of his studying and thinking in as readable a style as we had yet then encountered.

One saw, in the younger Linton, a talent of many facets. Objects of antiquity came to life when placed in their proper perspective under his clever hands; curious experiments on animals yielded their subtle implications for human behavior when Linton skillfully bridged the gaps between the species.

In the ensuing twenty-five years, students, colleagues and the scientific enterprise profited from the presence of Linton on the scene. It was with understandably great pleasure, therefore, that *The Tree of Culture* was anticipated.

With great reluctance and a sense of considerable disappointment I have to report that this posthumous volume is far from what one might have expected.

Perhaps we have over-anticipated. Perhaps the fault lies in the fact that the field itself has barely grown sufficiently to allow for a significant difference between what a talented mind saw the case to be in 1930 as against 1950. Whatever the reason, *The Tree of Culture*, while fascinating reading, is no modern day *Golden Bough*, *Primitive Culture* or *Decline of the West*.

The preface to the volume is written by Dr. Linton's widow. There follow ten parts, a concluding chapter, a bibliography and index. The ten sections are: I. In the Beginning; II. Evolutionary Processes; III. Basic Inventions; IV. Hunters and Food Gatherers; V. Southeast Asiatic Complex; VI. Southwest Asia and Europe; VII. Mediterranean Complex; VIII. Africa; IX. Orient; X. The New World. The sections are uneven in length, ranging from 18 pages for Part I to 124 in Part IX.

Mrs. Linton notes in her preface that:

The first half of the book deals with the general development of culture: the change from food gathering to food-raising and the other discoveries and inventions which have given man constantly improving control over his environment. . . . The second half of the book deals with the growth of civilizations, and the comparison here is with the branches which send down roots which find favorable ground and turn into sturdy independent trunks.

In truth, it is only the first 170 out of 674 pages of the text which are devoted to the general development of culture. But it is here that Linton is at his best. Sensible and illuminating generalizations are woven together with the same easy and confident disregard for the ordinary apparatus of scholarship which characterized *The Study of Man*. While this can be annoying to the point of distraction, it appears to be inherent in the purring flow of Lintonian language. Yet smoothness and charm of style cannot hide the fact that there is little in this first analytical section which Linton has not said elsewhere. Indeed, large sections seem to be a *déjà vu* of *The Study of Man*. It is beautifully done; and it is conveniently short and intelligent; but it is substantially a rehash of Linton by Linton.

The succeeding 500 pages simply take on too much, and are, perforce, neither history nor anthropology nor sociology in any acceptable senses of the terms. Let me make this clear. I mean that there is little here by way of fact or analysis which will instruct the professional. At the same time, for the student and for

the general public, there is here as good a brief introduction to world cultural pre-history and history as one could imaginably get into 500 pages.

At all times, Linton asks: what is the meaning in the panorama of human development, of this artifact, that bone, these methods of hunting, this type of tribal organization? Without ever making it explicit, there emerges a frame of reference within which to view the flows and ebbs of the tides of human effort, all fundamentally the same because it is Man who is the Agent, yet all disparate because Man is also an Inventor and Entrepreneur.

As Linton sees it, there have been three basic mutations in the history of human culture.

The first one was the use of tools, fire, and language. The second . . . was the discovery of how to raise food. . . . The third . . . consisted in certain basic inventions . . . of which two were perhaps the most important. . . . First of all was the discovery of how to get power from heat. . . . Next to this heat discovery, making it possible to use power machinery anywhere that you could get fuel, was the discovery of the scientific method.

The consequences of this third invention are of course, manifold. In his concluding chapter, Linton follows their paths through the worldwide revolution in technology, to the increasing equality in productive capacity among nations, on to the rising standards of living, the devaluation of previously scarce and valuable goods, the sliding-scale wage contract between the UAW and GM and the bureaucratization of modern society. He then pauses to discuss the problems raised by the desire to maintain a culture pattern in which both vertical socio-economic mobility and democracy are desired.

To accomplish this, he feels we need a 100 per cent inheritance tax, "unlimited, but selectively applied educational opportunities," and enforced celibacy for the elite in any given generation, plus a rule that no illegitimate child can become a member of the elite. With these he feels we could maintain vertical mobility and a homogenous classless society. He is not very optimistic about the likelihood of their acceptance.

The final pages of his book, being also the final remarks he delivered in a closing lecture to one of his classes, strike a note of long range optimism which is hardly consonant with his descriptions of the modern scene. He feels that

. . . in due course of time, a successful *modus vivendi* is going to be worked out, in which the advantages of modern science and modern technology will be combined with social systems

which are really adjusted to them, and which work.

And he notes, finally, that even if modern science and scientists are eliminated in the next totalitarian phase,

The hope of the modern worker in the social sciences is that during this period of really surprising freedom—because periods of freedom are so rare in world history—we may be able to get far enough ahead to lay a solid platform from which the workers in the next civilization can go on.

Absolutely the correct cool note, one might say, to strike at a final lecture to undergraduates.

For those who like it when the scientist stands off from his material and plays it "cool" and humorously, this book will be a pleasant reading venture. Others, however, may miss, throughout, any evidence of a deep personal concern by the author. At least none shows in the tone and heat of the relationship between the author and his materials. This may, however, be nothing more than a question of taste.

From the technical point of view, the book is handsome, well printed, cleverly illustrated and, on the face of the cover, RL is appropriately stamped in gold.

MELVIN M. TUMIN

Princeton University

The Social Self. By PAUL E. PFUETZE. New York: Bookman Associates (Library of Current Philosophy and Religion), 1954. 392 pp. \$4.50.

In the "Author's Foreword" Pfuetze states his objective to be the exploration of "the concept of the 'social self' from a philosophical and religious point of view," as this concept finds expression in the writings of George Herbert Mead and Martin Buber. His purpose, however, is not merely to expound their ideas, but to lay bare their important and striking similarities and divergences.

It is not necessary to relate Mead's view of the social self to the student of social psychology. We must, however, pay high tribute to the author for presenting a lucid and accurate statement of Mead's leading ideas. While the reviewer is much less familiar with the works of Buber he has the confident feeling that Pfuetze is fully at home with and wholly in control of the former's ideas. In each case the author's expository and critical analysis should serve the beginning student with a good introduction to the significant ideas of two seminal minds.

In the chapter entitled, "Martin Buber's

Philosophy of the Personal," Pfuetze presents Buber's leading ideas on the social self. Tracing these ideas to their source in Chassidistic piety and teaching, Pfuetze shows that, in contrast with Mead, who confines the dialogic life to the human sphere, Buber conceives it as a triadic relationship: man to God, as well as man to man. We are human, we are selves, only in so far as we live in personal responsiveness with both other men and God. Man thus lives in three different environments: the natural, the human, and the divine. Again, unlike Mead, who unswervingly held that the empirical self is exclusively a social product, Buber argued that social facts are not the only conditioning factors in the growth of the self: "Man's ultimate engagement is with God" (p. 251).

Neither Mead nor Buber is clear regarding the question whether the self arises through relations, or is already a self when it enters into relations with others. Mead is unambiguous, Pfuetze points out, in his *assertion* that mind and self are biosocial emergents, but is unconvincing in his *proof*. Buber believes that neither the individual nor the social community is the fundamental reality. The basic reality is the "sphere between"—the relation between persons. The individual does not exist first and then enter into communication with others. At the same time, and inconsistently, Buber assumes the existence of a transcendental subject as an antecedent condition of all relatedness. Relations are not absolute; they always presuppose a creative subject behind them. But neither is the "I" absolute. *I* and *Thou* are interdependent. Man is both subject and object.

In his distinction between the "I" and the "me" Mead shows a similar ambiguity. While as an empirical scientist Mead stressed the social process, or the "me," in which society is prior to the individual, he had to take account of the striving organism—the "I." The "I," however, he could not demonstrate, but only intuit or assume. Pfuetze very perceptively points out that Mead escaped the dilemma in typical "scientific" fashion by declaring that both the "I" and the "me" are only scientific postulates, fruitful for research, but not dogmas (p. 252).

These are only some of the equivocations and ambiguities in Mead's and Buber's discussions of the self. The author points out many more—always impartially and with a singular intent at arriving at the heart of the matter.

Pfuetze's essay goes beyond the theme of the social self. Thus there are thoughtful and gracious observations on the round and end of human existence, the moral issues revolving around the generalized other, particularly his

suggestion, like others before him, of its psychological equivalent for a personalistic conception of God, the conception of democracy held by both Mead and Buber which defines it in terms of the great community in which the self can find its greatest fulfillment, and so on. While these religio-philosophical issues may seem irrelevant to the hard-headed empiricists, they are germane to the central problem of the social self, especially in the writings of Buber, for the social self is not conceived by either man to exist in a moral vacuum. The essential difference in this regard between them is that for Mead moral issues are not to be resolved by means of ultimate standards, but by devising the best scientific means for so doing under prevailing conditions; whereas for Buber this is effected by appeal to a "third, higher, vertical dimension of God." Accordingly, Mead's self is only as ethical as the society which molds it into shape, whereas Buber's "other," being embedded in God, the eternal Thou, provides man with a spirit of hope and redemption quite alien to a purely secular or social morality. This is, at any rate, Pfuetze's belief and assertion.

An evaluation of Pfuetze's book, aside from the consideration of the fidelity with which he expounds the views of the two men, is not altogether easy. The reviewer, looking at psychological problems from a naturalistic standpoint, finds Buber's appeal to a *tertium quid* a violation of the principle of scientific economy. He does not deny to Pfuetze the natural right to his preference for Buber's triadic pattern of relations. He does, however, expect the preference to be based on firmer ground. Pfuetze must give us other than "personal" or preferential reasons. He is taking a privileged position when he affirms, for example, without evidence, that Buber's inclusion of God in the possibility of genuine relations with men "is richer—and perhaps truer" (p. 158). There is neither *prima facie* nor logical evidence for asserting that Buber's theocentric personalism "provides a firmer ground for an ultimate optimism concerning the end of human destiny"; nor has Pfuetze demonstrated that Buber's God as a "third" in the community suggest a triadic pattern of relations "which seems better to fit the facts than a purely dialectical pattern" (p. 355). Assertions like these are reflections of religious and poetic sensibility, for which one may be thankful, but they are not generalizations based on objective evidence.

HUBERT BONNER

Columbia University

Human Society in Ethics and Politics. By BERTRAND RUSSELL. New York: Simon and Schuster, 1955. 227 pp. \$3.50.

Russell's summation of his views on the eternal problems of right and wrong, sin, responsibility, and free will is enjoyable, charming, provocative, and unsatisfactory. His urbane opinions will anger the orthodox moralists, placate the pragmatists, and leave the "tough-minded" bewildered where they were found.

Russell wants to construct an ethic grounded in reason rather than in the taboos and superstitious codes of tradition. His technique, in brief, is to translate right and wrong as good and bad, where good becomes that which satisfies the greatest number of human desires. The Good is rooted in human desires since Russell, like Kinsey, has little patience with a morality "better than" our humanity and also because our common desires lay a floor under his ethic.

The fact of anti-social desires Russell meets variously. In part, by admitting the impossibility of complete harmony between private and public "goods"; in part, by urging the best application of the psycho-social sciences to channel desires toward the General Good.

In this "rational ethic" the concept of sin is useless—indeed, because of its intimate connexion with retribution, it is harmful. Further, sin, blame and retribution assume "free will" which, as Russell says, ". . . is always unhesitatingly rejected except when people are thinking about the free-will problem. If free will were common, all social organization would be impossible, since there would be no way of influencing men's actions." (p. 79)

The concluding chapters are devoted to an assessment of our alarming political predicament with Russell arguing that History cannot be read as Progress, that religion is not a cure (since faith breeds fanaticism, the virus from which we suffer), and that man stands a fair chance of exterminating himself, an end which Russell deplores on sentimental grounds although it sometimes seems to him a deserved conclusion to homo sap's chronicle.

Russell's faith rests with intelligence. A hope that what got us into this mess can, by a wiser application, get us out.

One is left with a flavor of impotent sweet reason. The promptings to moral action, Russell knows, are emotional. His cerebral ethic will not move many. Who can be motivated by Russell's General Good as by a thriving taboo? And his asides to the scientists of human behavior urging a more rational nurturing chain than is the fumbling one of family, school, church, and state—these asides assume a control we may yet see in 1984, or sooner, but

which freedom-loving Lord Russell would abhor as a distortion of his intent.

Gwynne Nettler

San Francisco

Sociology: A Book of Readings. Edited by SAMUEL KOENIG, REX D. HOPPER, AND FELIKS GROSS. New York: Prentice-Hall, Inc., 1953. xv, 607 pp. No price indicated.

In the past few years several selections of "readings in introductory sociology" have been published. The book under review is an excellent addition to these, and is, in my opinion, one of the two or three best of its kind. It includes six major fields of sociology: the physical and cultural bases of human society, the individual and society, institutions, the human community, collective behavior, and the dynamics of social life. There is a total of 121 selections. The criteria for choosing them were readability, authenticity, and authoritativeness. Because readability has been stressed, the various selections will undoubtedly hold the students' attention to a great degree. The writers represented include many from non-social-science fields.

The editors have attempted to present both sides of controversial issues, and accompany each selection with a brief introductory paragraph. The advantage of this is that the effects of bias can be reduced, and the students made aware of the fact that the most firmly-held convictions of sociologists are of doubtful validity, since they can be countered by opposing firm convictions. There are, for example, excellent selections (from a sociological viewpoint) under the headings "Sociology and the Scientific Spirit," "The Physical and Cultural Bases of Human Society," and others in the chapters devoted to the development, dynamics, and disorganization of personality. A sociological view of culture, society, and personality is clearly delineated in these chapters, which will be very impressive for the student. These are to some extent countered by selections that are anti-sociological. There is, for example, LaBarre's canned-milk theory of personal, national, and international disorganization: bottle-feeding results in these problems while breast-feeding precludes them. There is also the anti-sociological (and anti-anthropological?) article by Ralph Linton. According to Linton, infant-training is the beginning and the ending of human society and culture; he argues that nothing ever happens, personality-wise, after infancy: "The child who has been bullied by his father will always expect people in authority to bully him." The very fine selection by Kingsley Davis, on the effects of prolonged isolation on very young

children, is countered by a folklorish article on feral children.

It must be recognized, however, that there is always a legitimate basis for differences in opinion as to what ought to be included in a book of readings. The previous paragraph should not be allowed to interfere with the conclusion that the present book is excellent in its entirety. It deals with the persistent problems of sociology, presents a sociological interpretation of those problems, is logically organized, and is superior (in my opinion) to many of the introductory textbooks in the field.

FRANK E. HARTUNG

The University of Wisconsin

The American Family. By RUTH SHONLE CAVAN. New York: Thomas Y. Crowell Company, 1953. xiv, 658 pp. \$5.00.

The American Family is a successor to Dr. Cavan's earlier textbook, *The Family*. It is written, according to the author, from the same socio-psychological point of view as the earlier work and in part follows the same organization. The book is divided into four parts: The Present Status of the American Family, Social Configurations of the American Family, The Cycle of Family Life, and Adjustment of Family and Society. The basic theme of Part I has to do with the unsettled state of the American Family with emphasis upon the effects of technological and industrial change upon family life. Part II is concerned with the basic uniformities and patterning within the various strata of American Society. Part III delineates the processes of family life from the development of the adolescent personality to the later years of married life with its conflicts and adjustments. Part IV is concerned with the reorganization of the family.

Recurrent throughout the book there is reference to one or more of the nine issues which provide the basic problems with which the discussion is concerned. These issues are: What is the purpose of marriage? Should marriage be a permanent or a temporal (sic) relationship? Should young people have a free hand in selecting a mate? Should sex relations be limited to marriage? Is it necessary for husband and wife to have complementary roles? Is the loss of functions detrimental to family life? Can the family be economically independent? What constitutes an adequate number of children? What is the family's function in the personality development of children? These issues are the natural outgrowth of the author's conception of the present status of the American family as in the midst of social change from primary emphasis upon the institutional

aspects of marriage and family life to personal aspects. In this transition from "institution to companionship," according to Dr. Cavan, considerable instability and proliferation of patterns have developed which have yet to find satisfactory adjustment to other parts of the social order, although tending in that direction. The major aspects of the social situation to which the family is adjusting are mechanization, mobility, urbanism, and industrialization, all of which are also in process of rapid change. Consequently, "the new form of the family must be flexible and adaptable to continued change, with norms based on principles rather than fixed rules of behavior" (p. 29). It is this tendency upon the part of the author to moralize at times which is one of the disconcerting features of the book.

The most distinctive feature of *The American Family* is the delineation of family patterns by social class. Dr. Cavan has made good use of the fragmentary material available regarding differences in family structure by social class. She accepts the six-fold classification of classes developed by Warner and his associates, although her descriptive materials are chiefly of upper-upper, lower-upper, middle, and lower classes. Class, however, is not the only dimension used for the differentiation of social configurations of the family. The addition of ethnic groups as a second dimension, leads to the differentiation of the Mexican peasant family, the Puerto Rican family, the Italian family, the Norwegian family, and the Finnish family. The logic of this selection is not apparent.

Dr. Cavan divides the cycle of family life into seven stages: close child-parent relations, adolescence and casual dating, exclusive pair-dating and engagement, the early period of married life, the period of child-bearing and rearing, the quieter period of lessened responsibility, and old age. It is this section of the book which more clearly parallels the earlier treatment in *The Family*, although in terms of specific details the two treatments are quite different. Whereas in the earlier work, social crises were treated apart from the cycle of family life, the present version regards these aspects as related phases. Death as a crisis and the pattern of readjustment included in the earlier volume has been eliminated in the present treatment.

The weakest sections of *The American Family* are the chapters on marital adjustment and disintegration, and the concluding chapter on reorganization. The chapter on marital adjustment is lacking in conceptual depth, drawing heavily upon contemporary statistical analyses

for its materials, these analyses having been customarily common-sense in definition of concepts. The processes of marital disorganization are largely neglected and the process of disintegration is almost completely merged with divorce. The concluding chapter on reorganization, "Integration of Society and Family," performs little function except to indicate that the book has come to an end. It raises anew the question why an author of a textbook on the family must conclude with a chapter in which he expresses his confidence and hopes for the future.

The American Family is an interestingly written textbook which undoubtedly deserves and will have wide adoption. Its comprehensive coverage of the literature will recommend it to many teachers of the Family course.

ERNEST R. MOWRER

Northwestern University

Psychoanalysis and the Social Sciences (Volume IV). Edited by WARNER MUENSTERBERGER AND SIDNEY AXELRAD. New York: International Universities Press, Inc., 1955. 295 pp. \$6.00.

In this volume fifteen authors with established reputations as scientists have continued the work started by Géza Róheim and have extended his undertakings. One chapter, "Some Aspects of Semitic Monotheism" was written by Dr. Róheim before his death and was edited for this Volume by Drs. Muensterberger and Axelrad. Those familiar with Róheim's contributions know that "Man and society"—was the basic theme of his life work." Out of this came his interest in the relationship between anthropology and psychoanalysis. The basis for the merging of these two sciences is explained in the introductory chapter, "In Memoriam Géza Róheim."

The rest of the book is divided into three parts: Theory, Problems of Leadership, and Religion. Each division, indeed each chapter, could have been expanded into a book-length contribution, so a careful review analysis is not possible in the space allotted here. In covering each chapter one has the feeling that he is reading the abstract of a full-length manuscript.

Under theory, the study of complex culture is explored with attention given to the "interrelatedness of culture and personality," *ipso facto*, the relation between psychoanalysis and the social sciences, with culture and personality a multidisciplinary study.

Next to be considered is the anthropological and the psychoanalytic concept of the norm, in

which the concepts normality and abnormality, among others, are viewed in terms of anthropology and psychoanalysis. The influence of these definitions on therapy is appraised. Under "Some Sociological Aspects of Identification" four types of communication are considered, beginning with the interactive relationship between a mother and her baby with final emphasis on empathy and identification in power and other relationships. This makes behavior a function of the person and his situation and shows identification to be important in adjustments and in therapy.

In Part Two, "Problems of Leadership," ten authors deal with leadership and danger, taking advantage of this subject to show the relationship between the person (the leader) and society. A distinction is made between real and neurotic danger. Such processes as mass hysteria, group paranoia, group tensions and war neurosis are analyzed. There is collective protection for any type of leader with support likely to go to paranoiacs during a crisis when a paranoid mood exists in the group. Psychopathic personalities and manic-depressive personalities find processes in groups also friendly to the leadership of these two deviant types. The superstitions, the mood, the fears, the panic thinking of the group make identification with such leadership feasible.

This long section of the book deserves separate consideration. There is no way here to do justice to the material in a short review. There are observations on the failure and collapse of leadership; regressive phenomena in panic states; interactive processes in a group and the role of the leader; dictatorship and paranoia; panic and defenses against panic in the Bolshevik view of politics; and charismatic leadership and crisis.

The discussion of interactive processes in a

group provides an opportunity to show the similarities and differences between psychoanalysis and group therapy. Perhaps one should draw attention to the fact that psychoanalysis is an interactive relationship between the analyst and the patient, both group products, making psychoanalysis group therapy in a genuine sense.

Under religion, important aspects of Semitic monotheism are covered. Róheim finds significant parallels for monotheism, and many other themes in other cultures. St. Paul is analyzed against a background of Roman culture, Judaism, paganism, Oriental Mystery and early Christianity. A psychological investigation is made of Ruben, first-born son of Jacob.

The value of this book lies, in part, in the fact that it is in line with growing ideas in the field of human behavior. There is now a realization that all major problems fall between the sciences, that the person is a social-organic-human nature unity, highlighting the inextricable relationship between the person and society. Using his undefined biological nature the helpless newborn is seen working his way into culture by working culture into his life organization.

Processes are the same in the behavior of persons, groups and society showing collective protection for normal and abnormal behavior. These processes show through each person, exaggerated in some and minimized in others. Group therapy is a value. The relationship between the person and society is a universal situation with variations. These variations are no longer stumbling blocks in formulating universal laws where one of the characteristics of unity is always differentiation.

L. GUY BROWN

University of Rhode Island

BOOK NOTES

Street Corner Society: The Social Structure of an Italian Slum (Enlarged Edition). By WILLIAM FOOTE WHYTE. Chicago: The University of Chicago Press, 1955. xxii, 366 pp. \$5.00.

This is a welcome reissue of a sociological classic with the addition of an eighty page methodological appendix. It is superfluous to emphasize the impact of the book itself on the theory of informal social structures, of leadership, of upward mobility, of the primary group, and on many other areas. But the new methodological appendix will itself undoubtedly attract much attention. The appendix is a disarmingly frank account of William Whyte's experiences in

establishing rapport, defining his proper role as a researcher, developing a methodology and research problem, and getting key ideas, with an account of the errors he made at various stages in his work. Also, we are brought up to date on the activities of the principals in the study, including their reactions to the book.

The statement has many facets of interest. It is both an argument for immersing oneself in the data without a rigorous research design and a guide to doing so with less wasted time and effort than Whyte experienced. Through relating crucial experiences, Whyte also builds a description of the selective combination of intimacy and distance which he conceives as

the special role of the observer. As a personal document, the appendix is a revealing confession of the author's own intense partisan identification with Doc and his gang and consequent anti-upward mobility bias. The author's confessed inability to appreciate fully Chic's reaction to the unflattering treatment he received in the book reveals the persistence of identification with Doc's framework of thought, the exaltation of short-term primary group obligations, many years later.

Social Organization. By SCOTT A. GREER. New York: Doubleday & Company, Inc. (Doubleday Short Studies in Sociology), 1955. x, 68 pp. Ninety-five cents.

The author of this small volume seeks to develop systematically and make explicit the concept of social organization. In the process of giving more precise formulation to this widely used term a number of other and more specific concepts are elaborated and related to each other so that the book as a whole becomes an analysis of a series of integrally related sociological concepts.

The volume consists of five chapters dealing with (1) a general structure-function characterization of social organization as a phenomenon arising out of the interaction of individuals in groups in an effort to provide for their needs, (2) the relation of social organization to culture change, (3) a structural analysis of social groups in terms of the functional interdependence of the members, the formation and operation of roles and norms, and the exercise of control, (4) a typology of groups based on functions, and (5) an account of basic changes in the organizational structure of societies during past centuries.

It is not the purpose of this volume to add to or extend existing theory but rather to give clarity to existing concepts. As such it is a welcome and useful addition to the literature for students at almost any level. Particular attention may be called to the two chapters on social groups where the author most successfully re-works the traditional primary-secondary group dichotomy in terms of the kinds of functions involved. Using the familiar primary-secondary classification to refer to "dimensions" of groups rather than discrete kinds of groups, Professor Greer avoids much of the difficulty frequently experienced in group theory.

At no time does the author offer an explicit, complete and formally stated definition of social organization. Instead, he presents a structure-function model constructed largely out of the best of existing group theory.—JOHN M. FOSKETT.

Social Disorganization (Second Edition). By ROBERT E. L. FARIS. New York: The Ronald Press Company, 1955. viii, 664 pp. \$5.50.

This popular textbook was first published in 1948. For the most part revisions consist of added new materials; very little has been dropped from the old edition. Only modest changes of interpretation were made. These are confined almost entirely to the two introductory chapters. The criticism of "functional teleology" that was directed at the first edition might be harder to make now. An interesting change of interpretation has been achieved by regrouping the topics so as to distinguish between symptoms of disorganization that are general to the structures of the society as contrasted with structurally local symptoms.

The revised text, apart from the introduction, involves changes of points made in the previous edition and concerns references to important interpretive and empirical materials that have appeared in the literature. For example, Faris considers the criticisms of interpretations of areal distributions of rates of mental disorder; he cites the Yale studies of stratification and mental disorder; he treats Sheldon's and Glueck's work on constitutional factors in delinquency under the view of "obsolete theories of crime" as contrasted with the early edition in which related subject matter was treated as "early theories." There is a peculiar neglect of Goldhamer and Marshall's book, *Psychosis and Civilization*. Although it is listed in the bibliography of the chapter on "Mental Abnormality," Faris makes neither reference to nor use of it in his discussion of trends of mental illness which repeats the 1948 discussion word for word.

The revisions retain the book's excellence in readability and clarity.

Growing Up in the City: A Study of Juvenile Delinquency in an Urban Neighbourhood. By JOHN BARRON MAVS. Liverpool: The University Press of Liverpool, 1954. ix, 216 pp. 17/6.

The general theme of this monograph is one to which most American sociologists subscribe but which, nevertheless, is becoming decreasingly popular in treatises and programs dealing with crime and delinquency. Juvenile delinquency is considered not as a symptom of personal maladjustment but as a symptom of adjustment to a sub-culture which is in conflict with the culture of the community as a whole; it is viewed as a social tradition which the children of underprivileged areas learn to accept.

Eighty boys living in a Liverpool slum (the

detailed description of which covers about 50 pages) were interviewed at length. The author is superintendent of a settlement house in the neighborhood studied, and he draws heavily on his intimate knowledge of the patterns of social life and the unofficial delinquencies in the area. Case history material is used to illustrate the major points in the "delinquency tradition" argument, and ten short case histories are presented in the appendix. Some data on the frequency of occurrence of certain traits and conditions among the subjects are reported. The writings and research of Thrasher, Shaw and McKay, Whyte, and Glueck are utilized. There is no mention of Sutherland, however, and this is unfortunate because the author develops a theory of delinquency causation (pages 28-29) which closely parallels the differential association theory.

The last two chapters, which are devoted to a critique of existing delinquency programs and to "recommendations," explore the implications of the book's thesis for delinquency prevention. In the author's words, "The failure of many earlier counter-delinquency programmes has been due to inability to relate them to the socially constructive forces already in existence in local life. Treatment has been approached too often from the standpoint of the individual delinquent instead of the delinquency-producing society. The focus for the future should be the community itself, upon group rather than individual therapy."—DONALD R. CRESSEY

Demographic and Socio-Economic Characteristics of the Population of the City of Chicago and of the Suburbs and Urban Fringe: 1950. Chicago: Chicago Community Inventory, University of Chicago, 1954. iv, 53 pp. \$2.50.

This monograph, one of a series of publications analyzing trends in Chicago and the Chicago area, was prepared for the Chicago Plan Commission and the Office of the Housing and Redevelopment Coordinator. Its usefulness is not limited to these two agencies and should prove useful to many others as well as to demographers and students of urban areas. The data with respect to specific aspects of the populations as to sex, color, and age groupings cannot be found in other published materials.

The monograph seeks to make explicit the demographic and socio-economic characteristics of the "suburban" population through adopting the standard definitions used throughout this series, and the appropriate findings are related to a specific spatial base. The standardization of such terms as "metropolitan ring," "sub-

urbs and urban fringe," "satellite urban," and "metropolitan rural" makes comparisons between the City of Chicago and outlying segments of the population more definitive and meaningful. Heretofore, there has been a tendency to group the population in adjacent and contiguous areas under a general and often ambiguous category, like suburban, rural non-farm, or rurban fringe.

A signal contribution is the analysis and presentation of data contained in the original census tabulation sheets but which were omitted in the Bureau of Census' special reports, "Characteristics by Size of Place." Hence, the data on population mobility, years of school completed, marital status, family status, employment status, income, and major occupation group for persons classified by color, sex, and age have been abstracted by the authors. The results are presented in numerous tables throughout the text and others are in the appendix. The explanations of the variations between the various segments of the population are clearly stated.

Although the analysis is based on a 3 1/3 per cent sample, the findings furnish an indication of the direction and magnitude of the differentials between the population of Chicago and that of the suburbs and urban fringe. Where possible, comparisons with the populations of other cities are included (pp 8, 24-25, 28-29). In several instances, a set of calculations are made to show how great the differentials between the observed and hypothetical characteristic would be if there were no difference in the composition of the population of Chicago and the suburbs and urban fringe. This monograph demonstrates how unpublished but available census materials may be used more widely and fruitfully by demographers, agencies, and students of urban areas.—ROSE HUM LEE.

Juvenile Delinquency in Modern Society (Second Edition). By MARTIN H. NEUMEYER. New York: D. Van Nostrand Company, Inc., 1955. ix, 440 pp. \$5.00.

This popular text book, originally published in 1949, has been brought up to date and enlarged by approximately one hundred pages. The system of discussing the subject matter under three main headings—"Delinquency in a Changing Society," "Basic Factors and Conditions of Juvenile Delinquency," and "Delinquency Control"—remains unchanged, as do the thirteen chapter headings. There is little revision or deletion of the original materials; instead, the new research findings and the more detailed

discussions of old research findings have been inserted in the appropriate places in the text. In some chapters the order of presentation of the various topics has been improved.

The frame of reference of the first edition has been retained, but it is more explicitly stated. Generally, the point of view is that delinquent behavior can be studied but not explained. That is, correlations between various social, biological, and psychological phenomena and delinquency are viewed as "factors in" delinquency, but there is no attempt to "make sense" out of the correlations by examining their implications for criminological theory. Stated in another way, the author maintains that "it is in the process of interaction between the child and the successive situations in which he lives that misconduct arises," (p. 308) but he makes little or no attempt to explain why the interactions of some children result in delinquency and the interactions of other children result in law-abiding conduct.

Psychological Statistics (Second Edition). By QUINN McNEMAR. New York: John Wiley and Sons, 1955. vii, 408 pp. \$6.00.

This is a revised and somewhat expanded second edition of a familiar elementary statistics text. It preserves the clarity and conciseness of the 1949 edition and again emphasizes interpretation rather than derivation of statistical measures. The chapters on tabular and graphic methods, description of frequency distributions, correlation, and analysis of variance contain only minor changes. The treatment of probability, statistical inference and the testing of hypotheses has been reorganized and expanded, and is now followed directly by the chapter on small sample techniques. This section, which includes an excellent discussion of the significance of differences of proportions, and the chapter on chi-square are probably of greatest usefulness for sociology students.

New materials include very brief discussions of the discriminant function (1 p.), comparison of two or more correlated proportions (1 p.), the exact probability method for 4-fold tables (2 pp.), comparison of variabilities (5 pp.), the intra-class correlation (1 p.), the choice of error term in complex analysis of variance, and a few of the simplest of distribution-free methods (4 pp.). Some 83 exercises (13 pp.) dealing with description of frequency distributions, elementary probability and statistical inference, and zero-order correlation are appended. As in the earlier edition, footnote references to mathematical treatises and articles are rare, but references are given for a few recent developments.

Sociology: A Synopsis of Principles (Third Edition). By JOHN F. CUBER. New York: Appleton-Century-Crofts, Inc., 1955. xx, 652 pp. \$5.50.

The revised edition of this work is not substantially different from the earlier ones of 1947 and 1951. Important changes and improvements, however, have been made.

The introductory section has been rewritten and reorganized. Methodology is now discussed in a single chapter where the *Verstehen* approach, of which Cuber is particularly fond, is contrasted with Positivism. Separate consideration is given to the role of values in sociology. The treatment of social psychology contains a new chapter on social norms including a discussion of such concepts as the J curve, reference group theory, and *anomie*. An introductory chapter has been added to the section on institutions, which are dealt with from a structural-functional standpoint. In addition, newly introduced materials include Adorno's scale of ethnocentrism, role conflict, and non-school educational influences. The format has been improved, and illustrations and bibliographies have been changed and brought up-to-date.

While this text still strives for a fluent, easily understood approach, trying to meet students at their level, it would seem preferable that difficult and complex material not be made to appear quite so easy. The book, however, remains well written and readable, a feature which has made it one of the more popular introductory texts.—FRANK E. LEE.

The Dynamics of Social Interaction. By ANITA YOURGLICH. Washington, D. C.: Public Affairs Press, 1954. vi, 128 pp. \$2.50.

This book is purportedly an introductory sociology text using social interaction as its unifying theme. The usual weakness of this approach, lack of emphasis on structural aspects of society and institutions, is immediately noted. There is systematic treatment of only one institution, the family. The advantage which usually accrues to this point of view, namely a tendency to view values and social structures as the precipitates of social interaction which are tentative and likely to be modified in further interaction, the text eschews by its general tone. A consistent view of the variety of human social arrangements, i.e., comparative material from non-literate cultures, is not provided although other cultures are occasionally discussed. There is throughout heavy emphasis on the need for conformity and on the disruptive nature of deviation. Sameness in a mechanical sense is postulated as the basis of all society, while the process of differentiation and its im-

portance for social change are nowhere discussed. Basically the book is tendentious because of its underlying value commitment. Commitment to religious values *per se* need not be an obstacle in writing a good sociology text. In this one, however, even though the analytic framework emphasizes value conflict as related to social disorganization, the author tends to digress, especially in the first section, into an exegesis and a defense of the content of certain Christian values and/or an indictment of various "modern" ones. Both of these digressions must be by their very nature unscientific.—THOMAS KTSANES

A Manual of Nuer Law: Being An Account of Customary Law, Its Evolution and Development in the Courts Established by the Sudan Government. By P. P. HOWELL. London and New York: Oxford University Press, 1954. xv, 256 pp. \$5.60.

A Manual of Nuer Law offers an orderly presentation of the legal concepts and practises presently operative among the 356,000 Nilotic cattle-keeping tribesmen of the Anglo-Egyptian Sudan. A brief introduction to Nuer society is followed by sections on: (1) homicide and bodily injuries, (2) "hurt," (3) marriage and divorce, and (4) property rights. Concluding sections deal with religion in the law and a summary on the nature of Nuer law. The volume treats both with principles and ideal cases, and with specific legal actions developed in the past quarter century of "indirect rule" by the British. The book adds rich detail to the well-known works of Evans-Pritchard, who supplies an introduction to the present volume.

Like its counterpart by Hans Cory (*Sukuma Law and Custom*) dealing with a large tribe in Tanganyika, the present volume is a contribution both to practical affairs in local administration and to scientific knowledge. There is no doubt that it can be of inestimable value to well-intentioned administrators and ultimately to literate tribesmen. The assiduous use of such a book—if present circumstances in the Sudan permit—could do much to ease the transition of Nuer into the modern social world.

Sociologists will be interested in the more general relevance of the work. The manual is a valuable contribution to comparative jurisprudence, because of the careful and orderly presentation of native law which remains faithful to reality in the adjudication of Nuer conflict. It also documents the dynamic aspects of legal development in carefully noting the developments taking place. For example, Howell shows the erosion of moral sanctions against forms of illegal behavior by the very fact of providing penal sanctions.

The data are not only theoretically relevant. The volume as a whole documents the crucial role of legal systems in the structuring of a society and emphasizes the importance of understanding deviations from norms in assessing the normative aspects of culture. In sum, this volume provides an admirable justification for the close cooperation between the social anthropologists and administrators that has developed in England.

Nupe Religion. By S. F. NADEL. Glencoe, Illinois, The Free Press, 1954. x, 288 pp. \$4.75.

Nupe Religion is no ordinary addition to ethnological literature regarding ritual, magic and cosmology. It is rather, the product of a scholar who has done extensive field work in Africa, is acquainted with the philosophical development of Western Civilization, and has read his Parsons and Weber. Nadel endeavors to set forth the Nupe religious world view, and to link everyday Nupe life to that world view in both an ethnologically realistic and theoretically relevant manner.

Nupe is a kingdom in West Africa, the general structure of which was described by Nadel in *A Black Byzantium*. Its religion, prior to the increasing Mohammedanization, was a native product. In an introductory chapter Nadel endeavors to present the characteristic philosophy of that religion and invests Nupe rituals and religious behavior with meaning. The body of the book deals with divination, ritual, medicine and witchcraft. A section on "strange gods" studies acculturation by examining the factors in the selective adoption of ritual practise from neighboring peoples. After a chapter on Islamization, there is one on conclusions, relating the data to relevant sociological theory.

The Nupe creed starts with the recognition of a God who created man and the world, but who is fundamentally indifferent to their subsequent history. He neither punishes nor rewards, condemns nor praises. Ritual is the intercession between man and this deity. Medicine—magical action—is man's own doing, a means by which he is enabled to pick his way through the chances of good and evil as these may befall. There is a dualism in behavior that is expressed also in sexual dualism and sexual antagonism, but the dualism peculiarly lacks a moral tone; there is no sin.

Any person who has tried to elicit information on religion and present it in an orderly form knows the difficulties that must be faced. Nadel is to be commended for having done just this. He does not fall into the trap of trying to make each piece fit into a logical and self-contained whole. Religious doctrine

is in the realm of the mind, of thought and fantasy. It does not obey the logic of mechanics; if it obeys any logic at all, it does so recalcitrantly. Nadel has organized without imposing organization, and thereby preserved the living reality of Nupe religion.

Language and Society. By JOSEPH BRAM. Garden City, New York: Doubleday and Company, Inc. (Doubleday Short Studies in Sociology), 1955. viii, 68 pp. Ninety-five cents.

Language and Society is one of a long series of short studies in sociology now in preparation under the editorship of Charles H. Page. According to Page, Bram's contribution "is an introductory but systematic treatment of the . . . role of language in the life of man" (p. v). The pamphlet, in addition to the Editor's Foreword and a brief list of Selected Readings, is divided into seven short chapters: The Nature and Social Functions of Language (pp. 1-9); The Sciences of Language (pp. 10-18); Language, Socialization, and Culture (pp. 19-25); How Languages Change (pp. 26-34); Social Organization and Language (pp. 35-48); Languages in the Life of Nations (pp. 49-61); Language and the Democratic Society (pp. 62-63). There is no index.

It is difficult to assess a venture of this kind, where strict limitations of space, together with the extreme complexity of the subject matter, make it a difficult task to be both elementary and systematic. The field itself lacks systematization; studies of the role of language in human society involve a large number of disciplines, each of which approaches the problem from a different outlook and with quite disparate ends in view. To summarize those studies—from linguistics, sociology, anthropology, psychology, and philosophy—in 63 pages is clearly an impossible task. The result is what we find here: essentially a series of essays, chosen, one suspects, largely in terms of the author's own background of reading and interests, and connected only by the fact of being bound together in a single volume. The essays, it should be added, are interesting and well written, and clearly reflect the author's wide knowledge of the fields on which he has chosen to write.—
HARRY HOIJER

Language in Relation to a Unified Theory of the Structure of Human Behavior (Part I, Preliminary Edition). By KENNETH L. PIKE. Glendale, California: Summer Institute of Linguistics, 1954. x, 170 pp. No price indicated.

Recent years have seen marked interest in relating the content and method of linguistics to other parts of the socio-cultural domain. This

challenging book has a three-fold thesis: (1) the structures of linguistic and non-linguistic behavior are integrated in reality; (2) therefore, they must be described in an integrated way; (3) this requires "a unified theory, a unified set of terms, and a unified methodology which can start from any kind of complex human activity" (pp. 1-2), linguistic or non-linguistic, and "move without jar" from one to the other.

Point (1) has been debated but is widely accepted; (2) is widely honored, seldom practiced—witness the neglect of language in almost all acculturation studies, or of lexicon (semantic-cultural data) in many language descriptions. As for (3), it has often been declared that other social scientists could and should profit from the methods of linguists, but until this book, concrete details have not accompanied the declarations.

As teacher and practitioner of linguistics, Kenneth Pike has few peers. Within the "Yale School" he has followed Sapir in his view of linguistic reality, meaning, and the like. Now he offers what may prove the first successful attempt to generalize methods of structural linguistics for other fields. Point (3) of his thesis, however, need not follow from (1) and (2) so far as method is concerned; only empirical work will tell whether (or where) a methodological (not ontological or theoretical) line must permanently be drawn in the study of human behavior. Integrated description may yet require a plurality of methods.

Pike's attempt requires a critical review and recasting of much of current linguistic methodology itself; the reviewer finds this of prime importance for linguistics, whatever the ultimate success in application to other fields. This note can only list key terms Pike applies to both language and socio-cultural data: *emic* vs. *etic* viewpoints; *focus*, *spots*, and *classes* in behavioral wholes; *feature*, *manifestation*, and *distribution modes* of a behavioral unit; and the *behavioreme*. (Full reviews will appear in anthropological and linguistic journals.)

Part II, whose chapter heads are listed, promises fuller development of methodology, plus treatment of "Society and the Individual," "Equipment and Products of Behavior," and "Written Symbols."—DELL H. HYMES

Economy and Society. By WILBERT E. MOORE. Garden City, N. Y.: Doubleday and Company, Inc. (Doubleday Short Studies in Sociology), 1955. ix, 48 pp. Eighty-five cents.

In this brief essay, the seventh number of the Doubleday Short Studies in Sociology, the author has sought to provide a concise review of the relations between the economy and so-

society. Without denying the validity or usefulness of economic theory, Professor Moore has outlined the range of "economic" problems to whose understanding sociology must make a major contribution.

Sociologists have always included some economic variables in their analysis of communities and societies, although it is only in recent years that marked attention has been given to the social aspects of production, distribution, and exchange. Economists, on the other hand, have been led to ask sociological questions by the inadequacies of the social and psychological assumptions on which they have built their theory.

In his examination of the "borderline areas" between the two disciplines, the author succinctly and carefully considers the problems raised by classical economic theory: the "institutional preconditions" for economic organization, the nature of economic "motives," and the role of "groups and combinations" in economic life. He discusses those areas of sociological inquiry which are particularly significant for economics: "the deliberate social controls of the "economic order," occupational structure and the division of labor, the relations among economic interest groups and between business and industry and the community. Since theories of "economic determinism" have been important in the study of social change, they are briefly summarized and criticized. In place of these theories, Professor Moore raises some concrete questions concerning the significance for social change of industrialization and of shifts in the occupational structure.

Despite its brevity, this study should be useful to advanced students seeking an overview of the sociological approach to economic organization, institutions, and behavior. A short concluding chapter outlines the major problems yet to be solved in this area of sociological inquiry.—ELY CHINOV

Becoming: Basic Considerations for a Psychology of Personality. By GORDON W. ALLPORT. New Haven: Yale University Press, 1955. ix, 106 pp. \$2.75.

This volume is an essay based upon the author's Terry Lectures. The Terry Lecturer is given the task of "assimilating and interpreting his discipline as it relates to human welfare and to religion broadly conceived." Allport suggests, following James, that self-reflective behavior is the key to the problem. He terms self-reflective behavior which is ego involved "appropriate" behavior. He argues that higher organizational levels in the personality may selectively inhibit lower levels, and hence that values such

as the self may influence behavior and minimize determination by drives, habits, etc. Thus, the process of choice operates through the self image which selects, suppresses, or activates various courses of conduct when it is called upon. A specifically religious orientation is the result of the self attempting to relate itself meaningfully to the whole of Being. In this process there is generated a set of final meanings or values which then exercise creative pressure on subsidiary conduct in the manner discussed above.

With much that Allport says one can agree, especially with his gentle yet tolerant strictures against the use of rigid reductionistic models. However, to a sociologist Allport's delineation must ultimately be disappointing because of its strongly individualistic emphasis. The concept of society remains for Allport nothing but tribal conformity. Value is principally an individual phenomenon for him. It refers to the control of behavior by the highly structured aspects of the personality, i.e., the self concept. The sociologist also views appropriate behavior as structured and unified but not because of any internal disposition peculiar to the individual. Rather, appropriate behavior involves acts of symbolic reference and hence reflects the unity found in the linguistic categories common to any culture. Society is as much a fabric of values as a tissue of conventional behaviors. Value oriented behavior may thus be much less free than Allport envisions.

Throughout the essay Allport develops a consistent position and presents it with great clarity and lucidity. It is an interesting work apparently presenting Allport's own carefully thought out personal convictions.—THOMAS KTSANES

The Human Animal. By WESTON LA BARRE. Chicago: The University of Chicago Press, 1954. xv, 372 pp. \$6.00.

In *The Human Animal* Weston La Barre presents an age-old topic in a most impressive manner both as to style and content. The story begins with a depiction of the evolutionary facts that are related to man's fundamental organic pre-history. There follows a consideration of the primates and the anthropoids. The author presents in a unique manner the story of what he calls the "fateful two-footedness" and the "biologically unprecedented consequences of human handedness." Following the thread of man's development there is a remarkable discussion of the origins of fatherhood, motherhood and a comparative study of sexual and marital arrangements with the stress on the variability of customs and cultures within the limits of the same human biology of universal

man. There follows an analysis of speech as the "fundamental symbolic system and uniquely human cultural trait." Human psycho-sexuality and the consequences of this sexuality in various cultural institutions are then discussed in the most convincing manner that this reader has encountered anywhere in the literature. This discussion is also linked with still another consequence, namely, mental illness among human beings. In the remaining two chapters of the book the author points out, first, how some ancient culture traits have diffused universally so as to constitute universal human ways of perceiving the world and, second, some reflections on man's future that may be inferred from biological, historical and social-psychological knowledge.

The author incorporates in this volume rich insights from the biological, cultural, psychiatric and social science areas. It is really an attempt at integration of these various areas of knowledge insofar as they impinge upon the development of man, his culture, and his social group.

Many readers will be impressed with different segments of this volume. This reviewer would like to single out for a brief critical observation the chapter on *Why Man Is Human*. It is indeed puzzling that the author did not avail himself of the sources on socialization as developed by G. H. Mead, Charles H. Cooley, Harry Stack Sullivan, W. I. Thomas and others. In general, it is unfortunate that in such an eloquent attempt at integration the author should have excluded the rich sociological materials on the problem of socialization.

In the judgment of this reviewer, *The Human Animal* is one of the most rewarding books he has read in recent years. Student, teacher, and general reader alike will benefit greatly from this study of man.—SAMUEL M. STRONG

Man, Motives, and Money: Psychological Frontiers of Economics. By ALBERT LAUTERBACH. Ithaca: Cornell University Press, 1954. xiv, 366 pp. \$5.00.

This erudite volume, by an economist, is organized around the proposition that economists have failed to utilize adequately the contributions of psychology either for the formulation of theory or as a guide to economic reform. The author discusses three types of problems. The first section of the book inquires, "To what extent does business behavior in our existing society actually follow those rules of economic decision making which economic analysis has assumed or developed?" The middle section raises the problem, "In what ways, if any, can economic reforms hope to

reduce the social causes of personal insecurity?" The third section asks, "What personality traits are conducive to a person's active interest in the various types of economic reform, and which reform types, if any, are psychologically hopeful under the conditions of Western societies of the twentieth century?" As a whole the volume is a discussion of social problems, cast in the framework of economic psychology.

The book is addressed to scientists, public servants, and business men; it is largely a plea for an enlightened attitude toward economic reform, on both the national and international scenes. The arguments are bolstered by the findings of those psychologists who have been studying industry, especially the members of the Survey Research Center. Professor Lauterbach hopes that his fellow economists will emancipate themselves from their scientific ethnocentrism by consulting not only the work of psychologists but also sociology, anthropology, and econometrics.

It is the author's hope that the book will contribute to the development of a new discipline, economic psychology. The psychology offered is a thoroughly eclectic mixture; the economics is an avowedly normative discipline. It remains to be seen whether the union of two such entities will offer a fruitful attack on the problems to which the author addresses himself.—OSWALD HALL

Zest for Work: Industry Rediscovered the Individual. By REXFORD HERSEY. New York: Harper and Brothers, 1955. xvi, 270 pp. \$4.00.

The author, a psychologist, aims his book at the "practical person" and avowedly not at "scientists or professors." The research presented covers a period of nearly three decades. The subjects are selected American and German workers, supervisors, and shop stewards. The author's chief concern is the tie between emotional cycles and job adjustment. To get at the link he studies such "basic" factors as the physiological and psychological changes of individuals in relation to shop and outside events. His findings are set forth in charts and tables, and he also presents much interview data on incidents in the shop, family and love life, and on politics.

The sociologist will not be surprised to find the author focusing on individuals and rejecting "sociological wishes and drives" as not basic to the research. But he may be pleased to find the committed author using such phrases as "status among workers," "unofficial boss," "a potent informal factor," "making use of his stewards informally," and referring to the "comparison complex" as a force in shaping attitudes. The

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sociologist who has time to interpret and reframe data may feel repaid in looking at the chapters on "Youth and Its Problems," "The Nature of the Job," "The Supervisor," and "The Union Steward."

Our Needy Aged: A California Study of a National Problem. By FLOYD A. BOND, RAY E. BABER, JOHN A. VIEG, LOUIS B. PERRY, ALVIN H. SCAFF, AND LUTHER J. LEE, JR. New York: Henry Holt and Company, 1954. xxx, 401 pp. \$4.50.

The original research consists of an interview survey of a sample of all Californians aged 65 and over who were not in institutions. The sample was drawn by the multi-stage method. Others interested in surveys, whether of old people or other subjects, will find the discussion on methodology in the Appendix of value.

After an introductory chapter on the characteristics of California's aged population, the results of the survey are submerged in general

discussion until chapters 8 and 9. The intervening chapters cover the history of the many-pronged movement in California to secure some kind of old age assistance in that state, and a general discussion of state plans, administrative experience, and financial aspects, primarily in California but with many comparisons with other states.

Chapters 8 and 9 give a general picture of the old in California, especially of many factors in their lives that are related to their receipt of old age assistance. Recipients and non-recipients are compared on such items as help from children, living arrangements, and types of recreation. The interviewees also expressed their opinions on help from their children and on the assistance program. In these areas, the survey has general value to anyone interested in the financial status of the old and specifically in old age assistance.

The book closes with an evaluation of California's old age assistance plan and some recommendations.—RUTH SHONLE CAVAN

PUBLICATIONS RECEIVED

(Listing of a publication below does not preclude its subsequent review)



- ABRAMS, CHARLES. *Forbidden Neighbors: A Study of Prejudice in Housing.* New York: Harper and Brothers, 1955. xi, 404 pp. \$5.00.
- ADAMS, LEONARD P. and THOMAS W. MACKSEY. *Commuting Patterns of Industrial Workers: A Study of Experience Since 1940 in the Northeast Region.* Research Publication No. 1. Ithaca: Cornell University, Housing Research Center, 1955. iv, 135 pp. \$2.00.
- ALLPORT, GORDON W. *Becoming: Basic Considerations for a Psychology of Personality.* New Haven: Yale University Press, 1955. ix, 106 pp. \$2.75.
- ARIETI, SILVANO, M.D. *Interpretation of Schizophrenia.* New York: Robert Brunner, 1955. xviii, 522 pp. \$6.75.
- ATAMIAN, SARKIS. *The Armenian Community: The Historical Development of a Social and Ideological Conflict.* New York: Philosophical Library, 1955. 479 pp. \$4.75.
- AVERY, CURTIS E. and LESTER A. KIRKENDALL. *The Oregon Developmental Center Project in Family Life Education.* Portland: The E. C. Brown Trust, 1955. 60 pp. \$1.00.
- BAILYN, BERNARD. *The New England Merchants in the Seventeenth Century.* Cambridge: Harvard University Press, in co-operation with the Research Center in Entrepreneurial History, 1955. viii, 249 pp. \$4.75.
- BANKS, A. LESLIE (Editor). *The Development of Tropical and Sub-Tropical Countries with Particular Reference to Africa.* London: Edward Arnold, Ltd., 1954. xiv, 217 pp. U. S. distributor, St. Martin's Press, Incorporated. \$3.75.
- BARKER, CHARLES ALBRO. *Henry George.* New York: Oxford University Press, 1955. xvii, 696 pp. \$9.50.
- BARTH, ALAN. *Government by Investigation.* New York: The Viking Press, 1955. 231 pp. \$3.00.
- BATES, MARSTON. *The Prevalence of People.* New York: Charles Scribner's Sons, 1955. 283 pp. \$3.95.
- BAUER, RAYMOND A. with the assistance of EDWARD WASIOLEK. *Nine Soviet Portraits.* New York: John Wiley and Sons, Inc. and Massachusetts Institute of Technology, 1955. viii, 190 pp. \$3.95.
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- BLOTHNER, JOSEPH L. *The Political Novel.* Garden City, New York: Doubleday and Company, Inc. (Doubleday Short Studies in Political Science), 1955. xi, 100 pp. Ninety-five cents.
- BODLEY, R. V. C. *In Search of Serenity.* Boston: Little, Brown and Company, 1955. xiv, 176 pp. \$3.00.
- BONER, HAROLD A. *Hungry Generations: The Nine-*

- teenth-Century Case Against Malthusianism.* New York: King's Crown Press, Columbia University, 1955. viii, 234 pp. No price indicated.
- BONNER, JOHN TYLER. *Cells and Societies.* Princeton: Princeton University Press, 1955. 234 pp. \$4.50.
- BOOLSEN, FRANK M. (compiled and edited by). *Directory of University and College Criminology Programs.* Second edition. Fresno: Department of Criminology of Fresno State College in cooperation with the Society for the Advancement of Criminology, 1955. 15 pp. No price indicated.
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- BRAM, JOSEPH. *Language and Society.* Garden City, New York: Doubleday and Company, Inc. (Doubleday Short Studies in Sociology), 1955. viii, 68 pp. Ninety-five cents.
- BROWN, FRANCIS J. (Editor). *Approaching Equality of Opportunity in Higher Education.* American Council on Education Studies. Series I. Reports of Committees and Conferences. Number 59. Volume XIX. Washington, D. C.: American Council on Education, 1955. ix, 132 pp. \$1.50.
- BURKE, KENNETH. *Book of Moments: Poems 1915-1954.* Los Altos, California: Hermes Publications, 1955. xi, 96 pp. No price indicated.
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- CUBER, JOHN F. *Sociology: A Synopsis of Principles.* Third Edition. New York: Appleton-Century-Crofts, Inc., 1955. xx, 652 pp. \$5.50.
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- DUNNER, JOSEPH. *Baruch Spinoza and Western Democracy: An Interpretation of His Philosophical, Religious and Political Thought.* New York: Philosophical Library, 1955. xiii, 142 pp. \$3.00.
- EDEL, ABRAHAM. *Ethical Judgment: The Use of Science in Ethics.* Glencoe, Illinois: The Free Press, 1955. 348 pp. \$5.00.
- EGGAN, FRED (Editor). FRED EGGEN, WILLIAM H. GILBERT, JR., J. GILBERT MCALLISTER, PHILEO NASH, MORRIS OPLER, JOHN H. PROVINCE, and SOL TAX. *Social Anthropology of North American Tribes.* Enlarged edition. Chicago: The University of Chicago Press, 1937, 1955. xv, 574 pp. \$7.00.
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